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CHINA:

A GENERAL DESCRIPTION OF THAT EMPIRE AND ITS INHABITANTS, &c.

IN TWO VOLUMES.

VOLUME II.

CHINA:

A GENERAL DESCRIPTION OF THAT EMPIRE AND ITS INHABITANTS;

WITH THE

HISTORY OF FOREIGN INTERCOURSE DOWN TO THE EVENTS WHICH PRODUCED THE DISSOLUTION OF 1857.

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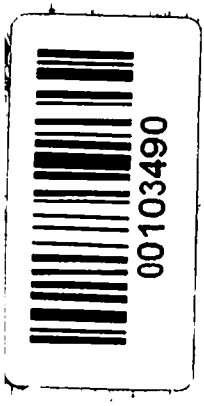
BY SIR JOHN FRANCIS DAVIS, BART., K.C.B.,
F.R.S., &c.,
LATE HER MAJESTY'S PLENIPOTENTIARY IN CHINA; AND
GOVERNOR AND COMMANDER-IN-CHIEF OF THE COLONY OF HONGKONG.



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CONTENTS OF VOL. II.

CHAPTER XIV.

RELIGION—CONFUCIANS.

Confucius — His doctrines and influence — The 'Four Books' — Mencius — 'Five Canonical Works' — Book of Sacred Songs — Historical fragment — Book of Rites — Confucius' history of his own times — The 'Yĕ-king,' its resemblance to the mystical numbers of Pythagoras — Theory of creation — Confucian philosophy — Choo-foo-tsze — Objects of state worship — Sacrifices — Recognition of a Supreme Being — Opinion of Jesuits concerning philosophy .. .. Page 1

CHAPTER XV.

RELIGION—BUDHISM.

Three systems of religion or philosophy — Indian history of Budhism — Its introduction into China — Its five precepts — Its resemblance to popery — Monastery near Canton — Pagodas — Chinese objections to Budhism — Debtor and creditor account in religion — Present condition of Budhism in China — Pagan and Romish practices — Chinese account of Christ — Sacred language — Paradise and hell — Budhist doctrines — Chinese Budhism 37

CHAPTER XVI.

RELIGION—TAOU SECT.

Laou-keun, the Chinese Epicurus — His sect — Fragment of old romance — 'The Philosopher and his Wife' — Origin of Voltaire's 'Zadig' — Superstitions — Fatalism — Illustrative tale — Charms and talismans — Belief in ghosts illustrated — Omens — Divination 70

CHAPTER XVII.

LANGUAGE AND LITERATURE.

Chinese characters symbols of ideas — Roots or radical characters — Written and spoken languages — Written characters — Rules for study — Literary habits — Ethics — Aphorisms — Histories — Account of Europe — Biographies — Civil code — European translations .. .. Page 102

CHAPTER XVIII.

LITERATURE—(*continued*).

Belles lettres — The drama — Passion for theatrical exhibitions — Absence of scenic deception — Neglect of the unities — Stage costume — Character of plays — Comparison with Greek drama — 'The Heir in Old Age' — Analysis of a tragedy — Poetry — Structure of verse — Character of poetry — Ancient ode — Poem on London — Romances and novels — 'The Fortunate Union' .. 138

CHAPTER XIX.

ARTS AND INVENTIONS.

Printing — Printed books — Paper — Ink — Gunpowder — Mariner's compass — Variation of needle — Navigation — Obstacles to improvement — Industrial arts — Cleaning cotton — Candle-making — Metallurgy — Metallic mirrors — Carving — Tools — Silk manufacture — Silkworms — Porcelain manufacture — Egyptian bottle — Lackered ware — Fine arts — Drawing and painting — Ornamental gardening — Sculpture — Music 173

CHAPTER XX.

SCIENCES.

Three divisions of human knowledge — Contempt for abstract science — Optics — Union of astrology with medicine — Scheme of physics — Practice of medicine — Ignorance of native doctors — Small-pox and vaccination — Chemistry — Cooking by steam — Distillation — Dispensaries — Science of numbers — Geography — Astronomy — Lunar year and cycle — Almanac — Mechanics and machinery — Architecture — The arch 220

CHAPTER XXI.

NATURAL HISTORY AND PRODUCTIONS.

Classification — European researches — Mr. Beale's aviary — Zoology — Mammalia — Birds — Reptiles — Fishes — Insects — Botany — Tea-plant — Timber-trees — The bamboo — Useful plants — Fruits — Flowers — Geological features — Abundance of coal — Volcanic symptoms — Earthquakes — Minerals — Metals .. Page 268

CHAPTER XXII.

AGRICULTURE AND STATISTICS.

Climate and meteorology — Typhoons — Discouragements to agriculture — Objects of cultivation — Absence of pasture — Allotment of wastes — Manures — Irrigation — Rice-cultivation — Encouragements to population — Obstacles to emigration — Census — Positive checks — Land-tax — Revenues partly in kind — Grain-junks — Salt-tax — Taxes on transit — Expenditure — Deficiency of revenue — Existing abuses 319

CHAPTER XXIII.

COMMERCE.

Coinage of base metal — Silver passes by weight — Paper currency — Pawnbroking — Interest of money — Internal commerce — Disadvantages of Canton for English trade — Origin of Hong merchants — Imposts on foreign shipping — Linguists — Smuggling — Trade in opium — New law against it — Black teas — Green teas — Preparation of tea — Spurious green teas — European tea-trade — Increase of English trade since 1842 367

APPENDIX.

I.—Free Importation and Consumption of Opium 411
II.—The Tae-ping Rebellion 412

INDEX 417

ILLUSTRATIONS.

	Page
Mendicant Priest of Budha	40
Plan of Budhist Monastery near Canton	44
Gateway of Budhist Temple near Canton	58
Officiating Priest of Budha	67
The Chinese Widow fanning the Grave	76
Trading Junk	188
Cleaning Cotton	194
Metal Teapot, covering Earthenware	196
Porcelain Bottle, from Egyptian Tombs	211
Spectacles	223
Chinese Abacus	244
Rice-Mill	257
Chain-pump, from Staunton	259
Bamboo Water-wheel	261
Garden Pavilion	265
Bridge for Foot-passengers	267
Chinese Camel-driver	281
Fishing Corvorant	289
Insects producing Wax, from Staunton	293
Camellia oleifera	295
Joo-ee, formed of Jade	316
Cave of Camoens, Macao	320
Mode of Irrigation	335
Fishing with Birds	343
Coin of a Manchow Emperor	368
Cargo-boat	386
Mandarin with Opium-pipe	392

CHINA.

CHAPTER XIV.

RELIGION—CONFUCIANS.

Confucius — His doctrines and influence — The 'Four Books' — Mencius — 'Five Canonical Works' — Book of Sacred Songs — Historical fragment — Book of Rites — Confucius' history of his own times — The 'Yĕ-king,' its resemblance to the mystical numbers of Pythagoras — Theory of creation — Confucian philosophy — Choo-foo-tsze — Objects of state worship — Sacrifices — Recognition of a Supreme Being — Opinion of Jesuits concerning philosophy.

It has been observed that the very errors of the human mind form a part of its history; and it is on this ground that the different religious or philosophic persuasions into which the vast population of China has been divided, claim a portion of our attention; while it may be added, of the doctrines of Confucius in particular, that they form the basis of the whole system of government. These last, perhaps, owe some of their better traits to the circumstance of having originated during a period when the country was divided into a number of small states, nominally dependent on one head, but each ruled by its own laws; a condition more favourable to liberty and good government than its subsequent union under one absolute master.

Confucius, as his name has been Latinized by the Jesuits (being really Koong-foo-tse), was born about 550 B.C., in the state Loo, within the district now called Keo-fow Hien, just to the eastward of the great canal, in

Shantung province. It will be observed, from the date, that he was a contemporary of Pythagoras. From his earliest age, Confucius is said to have been indifferent to the ordinary amusements of youth, and devoted to grave and serious pursuits. Being the son of a statesman, the chief minister of his native kingdom, he employed himself entirely on moral and political science, and neither investigated any of the branches of natural knowledge, nor meddled with the common superstitions of his country. His doctrines, therefore, constitute rather a system of philosophy in the department of morals and politics, than any particular religious persuasion.

It was the chief endeavour of the sage to correct the vices which had crept into the state, and to restore the influence of those maxims which had been derived from the *ancient kings*, as Yaou, Shun, and others, celebrated in history or tradition. That he was sincere, and that his professed love of reform was not a mere stepping-stone to his personal ambition, or an instrument to serve his private ends, was proved by the readiness with which he abandoned the station to which his talents had raised him, when he found that his counsels were unavailing, and his influence inadequate to the restoration of order. That portion of modern China which lies to the north of the great Keang was then divided into a commonwealth of states, of which the native kingdom of Confucius formed only a constituent member; and through these various countries he journeyed in a condition of simplicity and comparative indigence, devoting himself to the instruction of all ranks, and to the propagation of his precepts of virtue and social order. Such was the success of his endeavours, and the weight of his influential character and good example, that he is said to have reckoned, at length, as many as three thousand

disciples or proselytes, of whom seventy-two were more particularly distinguished by their devotion to their master, and their practice of his precepts. He was now sought after by the rulers of the several states, and employed in high offices tending to mature his knowledge and experience; but at length retired to the company of his chosen disciples, to study philosophy, and compose or compile those celebrated works which have handed down his reputation to after-ages, and become the sacred books of China.

Among the moral doctrines of this great oriental teacher might be noticed some which have obtained the universal assent of mankind, and which cannot be surpassed in excellence as rules of conduct. He taught men "to treat others according to the treatment which they themselves would desire at their hands," and "to guard their secret *thoughts*," as the sources and origin of action. In common, however, with every other scheme of philosophy merely human, there is much to condemn in the principles of the Chinese sage. He carried his inculcation of filial duty to so absurd and mischievous an extent as to enjoin it on a son "not to live under the same heaven" with the slayer of his father; or, in other words, to exercise the *lex talionis*, and put him to death. This pushing to extremes of the paternal claim has (as we have before hinted) been the constant device of Chinese statesmen and rulers; the tendency being to strengthen the authority of the *emperor*, founded as it is in the rights of a father over his children. Confucius was renowned for his unpretending humility and modesty; but this portion of his mantle has not descended on his disciples of the present day; for if distinguished occasionally by some of the virtues of *Stoics*, they resemble that sect still more in the high tone of self-sufficiency and

pride which marks the conduct of the Confucians to all who have not the honour to profess the state religion of China.

By the marriage which he had contracted at the early age of nineteen, the sage had but one son, who died before his father, leaving, however, a grandson to Confucius, who inherited the talents and virtues of his progenitor, and distinguished himself in high stations. The founder of another sect, calling themselves *Taou-sze*, or "Doctors of reason" (whom we shall hereafter describe), was contemporary with the great philosopher, and perhaps has been indebted, in some measure, for the consideration in which he is held, to the attention bestowed on him by Confucius, who is said to have repaired to his dwelling for the purpose of conferring with him, and exploring his tenets. After completing his last work, the *Chun-tsieu*, which was a history of the times in which he had lived, Confucius died at the age of seventy-three, much regretted by the rulers of the states whose government and morals he had contributed mainly to ameliorate. Time has but added to the reputation which he left behind him; and he is now, at the distance of more than two thousand years, held in universal veneration throughout China by persons of all sects and persuasions, with shrines and temples erected to his worship.

Dr. Morrison, in the first part of his Dictionary, has quoted various particulars relating to the life of the sage from several Chinese works. Confucius is said to have been more than nine cubits in height; and whatever may have been the cubit of those days, he was universally called "the tall man." Various prodigies, as in other instances, were the forerunners of the birth of this extraordinary person. On the eve of his appearance upon earth, two dragons encircled the house, and celestial

music sounded in the ears of his mother. When he was born, this inscription appeared on his breast—"The maker of a rule for settling the world." The pedigree of Confucius is traced back in a summary manner to the mythological monarch *Hoang-ty*, who is said to have lived more than two thousand years before Christ. The morality of his family, however, notwithstanding this high descent, and even of himself, was in one respect open to censure, for he divorced his legal wife, and the example was followed by his son and grandson.

When he had concluded his travels through the various states, and retired to his native kingdom, which was at the age of thirty, disciples began to flock to him in great numbers. "At fifteen (says the sage in the *Lun-yu*) I commenced my application to wisdom, and at thirty my resolution was immovably fixed." The close of his life was far from tranquil, and he was either employed in the affairs or implicated in the disputes of the petty states of his day. A quarrel, in which the sovereign of Loo was defeated, obliged Confucius to flee northward to the kingdom Tsy, situated in the modern gulf of Pechely. Between his fiftieth and seventieth years he was absent from home fourteen years together. When seventy years of age, his favourite disciple Yen-hoey died. Confucius, being greatly concerned for the continuance and propagation of his doctrines, and having entertained great hopes of this person, was inconsolable for his loss, and wept bitterly, exclaiming, "Heaven has destroyed—Heaven has destroyed me!" In his seventy-third year, a few days before his death, he moved about, leaning on his staff, and sighed as he exclaimed—

"The mountain is crumbling,
The strong beam is yielding,
The sage is withering like a plant."

He observed to a disciple that the empire had long been in a state of anarchy, and mentioned a dream of the previous night, which he regarded as the presage of his own departure; and so it came to pass, for after seven days of sickness he died. The 18th day of the second moon is kept by the Chinese as the anniversary of their sage's death. In the Hân dynasty, long subsequent to his existence, Confucius was dignified with the highest title of honour, *Koong;* and he was subsequently styled the Sovereign Teacher. The Ming, or Chinese dynasty, which succeeded the Mongols, called him "The most holy teacher of ancient times," a title which the present Tartar family has continued.

Though only a single descendant (his grandson) survived Confucius, the succession has continued through sixty-seven or sixty-eight generations to the present day, in the very district where their great ancestor was born. Various honours and privileges have always distinguished the family. The heads have enjoyed the rank of nobility; and in the time of Kâng-hy the total number of descendants amounted to eleven thousand males. In every city, down to those of the third order, styled Hien, there is a temple dedicated to Confucius. The emperor himself, the magistrates, and all the learned of the land do him homage. The philosopher in his lifetime sometimes spoke as if persuaded that he had received a special commission to instruct the world. In a moment of apparent danger he exclaimed, "If Heaven is resolved that my doctrine shall not fail, the men of Kuâng can do nothing to me."

Dr. Morrison justly observes that "Confucius was engaged in politics all his life; and even his ethics dwell chiefly on those social duties which have a political bearing. A family is the prototype of his nation or

empire, and he lays at the bottom of his system, not the visionary notions (which have no existence in nature) of *independence* and *equality*, but principles of *dependence* and *subordination*—as of children to parents, the younger to the elder, and so on. These principles are perpetually inculcated in the Confucian writings, as well as embodied in solemn ceremonials, and in apparently trivial forms of mere etiquette. It is probably this feature of his doctrines that has made him such a favourite with all the governments of China for many centuries past, and down to this day. These principles and these forms are early instilled into young minds, and form the basis of their moral sentiment: the elucidation and enforcement of these principles and forms is the business of students who aspire to be magistrates or statesmen, and of the wealthy who desire nominal rank in the country; and it is, in all likelihood, owing chiefly to the influence of these principles on the national mind and conscience that China holds together the largest associated population in the world." It is certain that no pagan philosopher or teacher has influenced a larger, if so large, a portion of the whole human race, or met with more unalloyed veneration. Whatever the other opinions or faith of a Chinese may be, he takes good care to treat Confucius with respect; and, as we have before observed that Confucianism is rather a philosophy than a religion, it can scarcely be said to come into direct collision with religious persuasions. The Catholics got on very well until they meddled with the civil and social institutions of China.

A summary view of the original works or compilations which have come down from the age of Confucius and his disciples will perhaps enable us to form some judgment respecting that school of philosophy and literature of which he was the head, and which constitutes, at this

day, the standard of Chinese orthodoxy. The classical or sacred works consist in all of nine: that is to say, the 'Four Books,' and the 'Five Canonical Works.' In the course of a regular education, the former of these are the first studied and committed to memory, being subsequently followed up by the others; and a complete knowledge of the whole of them, as well as of the standard notes and criticisms by which they are elucidated, is an indispensable condition towards the attainment of the higher grades of literary and official rank. The original text of these works is comprised within a very moderate compass; but the numerous commentaries, which from time to time have been added, contribute to swell the whole to a formidable bulk. The art of printing, however, which gives the Chinese such an advantage over other Asiatic nations, together with the extreme cheapness of paper, has contributed to multiply the copies *ad infinitum*, and to bring these and most other books of the country within the reach of almost everybody.

1. The first of the 'Four Books' is the *Ta-hëŏ*, which has been correctly rendered 'The School of Adults' by the Jesuits, meaning literally the *study of grown persons*. A later work, which has been named in contradistinction *Seaou-heŏ*, 'The Study of Youth,' commonly precedes the other in education. The Ta-hëŏ proceeds to show that in the knowledge and government of *oneself* the economy and government of a family must originate; and going on thence to extend the principle of domestic rule to the government of a province, it deduces from this last the rules and maxims which should prevail in the ordering of the whole empire. The first section of the work is ascribed to Confucius himself, and the remaining ten to his principal disciple. The pithy and condensed style of these celebrated bequests of antiquity may be inferred

from the fact that the *text* of this work (however it may be swelled by commentaries) contains less than two thousand words; and its contents are briefly summed up as tending "to the improvement of oneself; the regulation of a family; the government of a state; and the rule of an empire." The end and aim of the work is evidently political; and in this instance, as in others, the philosopher and statesman of China commences with *morals* as the foundation of *politics;* with the conduct of an individual father in his family, as the prototype of a sovereign's sway over his people. In the sixth section of this work "the beauty of virtue" is inculcated somewhat in the manner of the Stoics, and its practice recommended as a species of enjoyment. There is some wisdom shown in pointing out the importance and utility of rectifying "the motives of action." The following sentence, too, is remarkable:—"He who gains the hearts of the people secures the throne; and he who loses the people's hearts loses the throne." There is every reason to believe that the recollection of this has tended to soften in practice the absolute theory of the Chinese government, and contributed to its general quiet and stability.

A very detailed analysis of their classics cannot be attempted in a work of this popular description, and we therefore conclude our notice of the Ta-heŏ by quoting a maxim from the tenth section, which might be recommended to the notice of European financiers: "Let those who produce revenue be many, and those who consume it few; let the producers have every facility, and let the consumers practise economy: thus there will be constantly a sufficiency of revenue,"—and (it might have been added) no national debts. There is a fair translation of the Ta-heŏ, with the text, in Dr. Marshman's

Clavis Sinica; and M. Pauthier has lately published a Latin version at Paris.

2. The title of the second of the 'Four Books' is *Choong-yoong*, which means the 'Infallible Medium,' or the *juste-milieu*. It is an application of the Greek maxim—

ἡ δε μεσοτης εν πασιν ασφαλεστερα,

that "the middle is in all things the safer course." Whatever vicissitudes a man may undergo, he is taught to be always equal and moderate; never haughty or elate in an exalted station, nor base in an humble one. It must not, however, be supposed that the thirty-three sections into which this work is divided are always of a practical nature, for they contain much that is extremely obscure, and sometimes almost unintelligible. The work serves generally to expound the ideas of the Chinese respecting the nature of human virtue. They commonly divide mankind into three great classes:—1. The *Shing*, perfect or inspired, who are wise or virtuous independently of instruction—the saints of China. 2. The *Hien*, good or moral, who become so by the aid of study and application. 3. The *Yu*, vicious or worthless, who degenerate into that state in spite of teaching. The Chinese consider that the nature of man is originally pure and inclined to virtue, and that it becomes vitiated only by the force of evil example, and by being soiled with what they call "the dust of the world." The old Greek poet Hesiod has four lines which define with surprising exactness the above triplicate classification of mankind. He says that—

"He indeed is the BEST of men who of himself is wise in all things;
Though he is GOOD who follows a good instructor;
But he who is neither wise of himself, nor, in listening to another,
Remains mindful of advice—this is the WORTHLESS Man."

The best translation of the *Choong-yoong* is that by Abel Rémusat, late professor of Chinese at Paris: but his version has been properly censured for being rather too verbal, and for too close an adherence to the mere letter of the text, in a work which, of all others in that language, requires to be illustrated with some degree of freedom in order to make it intelligible.

3. The *Lun-yu*, the conversations or sayings of Confucius recorded by his disciples, together with the most remarkable actions of his life, is in all respects a complete Chinese *Boswell*. There is the same submissive reverence towards the great master of letters and morals, and the same display of self-devotion in erecting the fabric of his greatness. The conversational style is preserved alike throughout, as may be seen from these examples:—

LUN-YU.

A disciple inquired, "What must the sage do to deserve renown?" *Confucius* asked, "What do you call renown?" The other replied, "To be known among the nations, and at home." *Confucius* said, "That is merely notoriety, and not true renown. Now this consists in straightforward and honest sincerity, in the love of justice, in the knowledge of mankind, and in humility," &c.

BOSWELL.

Talking of Goldsmith, he said, "Sir, he is so much afraid of being unnoticed, that he often talks merely lest you should forget that he is in the company." *Boswell*, "Yes, he stands forward." *Johnson*, "True, sir; but if a man is to stand forward, he should wish to do it, not in an awkward posture, not in rags, not so as that he shall only be exposed to ridicule," &c.

The advantage, however, to our taste, is much on the side of the modern philosopher. The Chinese work consists in all of twenty chapters, divided into two equal parts—the *Shang* and *Hea* (upper and lower), first and second. The maxims turn chiefly upon private or public conduct, morals or politics. The demeanour and habits of the sage are diligently recorded:—"He was mild, yet firm; majestic, though not harsh; grave, yet agreeable." He seems to have been fond of a simple and retired life. "The virtues of country people (he observes) are beautiful: he who in selecting a residence refuses to dwell among them, cannot be considered wise." The following is a specimen of the style of the Lun-yu. Being asked by a disciple to define the man of superior virtue, Confucius replied, "He has neither sorrow nor fear." "Does that alone constitute the character?" observed the other, surprised. "If a man," rejoined the sage, "searches within and finds nought wrong, need he have either sorrow or fear?" This is nothing more than the sentiment of Horace:—

"Nil conscire sibi, nullâ pallescere culpâ."

The Chinese philosopher is stated to have been an enthusiastic lover of music, and to have done something to improve it. Certain it is, that whatever was said or done by him is made a rule of action at the present day, even to his personal demeanour. It has been observed before that many of the provisions of the Penal Code are founded upon his maxims; and one instance in particular was noticed, wherein it is enacted, "that children and near relations, or dependents, shall not be punishable for concealing the faults of those with whom they dwell." The object of this seems to be the strengthening of kindred and domestic ties, founded on that precept of

Confucius—"The father may conceal the faults of his son, and the son those of his father—virtue consists with this." The most remarkable passage of the 'Four Books,' and the best maxim of the Chinese teacher, is the following:—Being asked if any *one word* could express the conduct most fitting for one's whole life, he replied, "Will not the word *Shoo* serve?" and he explains this by "Do unto others as you would they should do unto you." This word must be admitted to be one of comprehensive import.

"There are three things," said Confucius, "to beware of through life. When a man is young, let him beware of his appetites; when middle-aged, of his passions; and, when old, of covetousness especially." The following passage deserves notice:—"How can a mean man serve his prince? (asked the sage)—When out of office, his sole object is to *attain* it; and when he has attained it, his only anxiety is to *keep* it. In his unprincipled dread of losing his place, he will readily go all lengths."* The extreme conciseness of the language in which these books are written makes it sometimes very difficult to render their true meaning into English, except by some degree of paraphrase and circumlocution; and hence the apparent absurdities that have been justly ridiculed in some of the Protestant missionary translations. Those honest but injudicious men seemed to imagine that a verbal rendering was the one best calculated to convey the import of the original, whereas the very reverse is often the fact. The language of China is so much altered in point of copiousness, since the 'Four Books' were composed, that the native editions consist chiefly of commentaries and amplifications which are found to be absolutely necessary towards elucidating the text. This, it must be admitted,

* Chap. xvii. sec. 15.

may occasionally lead the rulers of China to interpret their great oracle in the manner best calculated to suit their own purposes, and such was the opinion of a correspondent of ours, who had spent half his life at Peking:—"Confucius est toujours grave, sentencieux, laconique, mystérieux—les lettrés y trouvent tout ce qu'ils veuillent."

4. Ranking next to Confucius *(similis aut secundus)* is the celebrated Mencius, so called by the Jesuits, from his Chinese name Meng-tse. He lived about a century after his great predecessor, whose doctrines he still farther illustrated and promoted, and left behind him the *fourth* of the sacred books, bearing his own name. His birth was, as usual, said to be attended with prodigies, but the less fabulous part of the legend attributes the virtues and learning of Mencius to the excellent precepts and example which he received from his mother. Such was her care of the boy, that she three times removed her dwelling on account of some fault in the neighbourhood. Satisfied at length on this point, she sent her son to school, while she, a poor widow, remained at home to spin and weave for a subsistence. Not pleased with his progress, she learned, on inquiry, that he was wayward and idle, upon which she rent the web, which she was weaving, asunder, partly from vexation, and partly as a figurative expression of what she wished him to remember; for when the affrighted boy asked the reason of her conduct, she made him understand that, without diligence and effort, his attending school would be as useless to his progress in learning, as her beginning a web, and destroying it when half done, would be to the procuring of food and clothing. He took the hint, addressed himself to learning with all diligence, and became a sage second only to Confucius himself. One anecdote of the mother of Mencius deserves notice. The boy, on seeing some

animals killed, asked her what was going to be done with them. She in jest said, "They are killed to feed you;" but, on recollecting herself, she repented of this, because it might teach him to lie; so she bought some of the meat and gave it to him, that the fact might agree with what she had uttered. The Chinese hold her up as the pattern of mothers.

The first book of Mencius opens with a conversation between him and the king of the state called Leang. The latter had usurped the title, and, when he invited the worthies and philosophers of the day to his court, Mencius went among the rest. On his entering, the king accosted him, saying, "I suppose you come to increase the gains of my country?" To which he replied, "What need is there to speak of gain? Benevolence and justice are all in all;"—and he illustrated this by showing that, if a spirit of selfish avarice went abroad among all ranks from the prince downwards, mutual strife and anarchy must be the result; upon which the king, as if convinced, reiterated his words, and said, "Benevolence and justice are all in all." Mencius lived to the age of eighty-four, and his memory remained without any particular marks of honour, until an emperor of the Soong dynasty, A.D. 1085, reared a temple to him in Shantong province, where his remains had been interred. He then obtained a niche in the temple of Confucius. Kea-tsing, an emperor of the Ming dynasty, which expelled the Mongols, established the memory of the sage in its ancient honours, and made one of his real or supposed descendants in the *fifty-sixth* generation a member of the Hân-lin College, which title was to remain hereditary in the family for the performance of the requisite sacrifices. "If," as Dr. Morrison * observes, "the persons who now profess to

* Dictionary, part i. p. 732.

be the posterity of Confucius and Mencius be really so, their families are probably the most ancient in the world." It would certainly be difficult to find even a Welsh pedigree to compete with them.

The contents of the book of Mencius exceed the aggregate of the other three, and the main object of the work is to inculcate that great principle of Confucius—philanthropic government. To our taste it is by far the best of the whole; and while it must be confessed to contain a great deal that is obscure, and perhaps worthless, there are passages in it which would not disgrace the productions of more modern and enlightened times. It is curious to find in the text-book of an absolute government sentences which savour much more of the rights of humanity, and a regard to the general good, than could have been expected. Nothing indeed is more remarkable, in the 'Four Books,' than the freedom with which Confucius and Mencius give their advice to kings. An instance occurs in the sixth chapter of the work under consideration. In reply to a proposition from the sovereign, that certain severe or unjust taxes should be only lightened this year, and abolished the next, Mencius replies, "This is like a man who should steal his neighbour's goods, and, on being censured, should answer, 'I will take so much less every month, and stop next year.' If you know the thing to be unjust, give it up instantly."

"The hearts of the people" are stated to be the only legitimate foundations of empire, or of permanent rule.* "If, when with an equal strength (it is said) you invade a country, the people come to welcome you with supplies,

* "This obvious truth has been much insisted on in every period of Chinese history; and, being more or less acted on, has ameliorated the condition of the people, who, though not formally represented, in any legislative assembly, have always found other means of making their voice heard."—*Morrison.*

can this be on any other account than because you are about to rescue them from fire and water? * but if you deepen the water and increase the fire, they will turn from you." Were any European power ever disposed to gain an influence in China by expelling the Tartars, this would be the language to hold; and as a secret association actually exists, whose object is the restoration of the Chinese dynasty, this seems to be the mode in which the end might most easily be attained. In fact, the Tartars are at all times extremely jealous of any intimate connexion arising between their Chinese subjects and foreigners; and this lies at the bottom of their rigid system of exclusion. It was *prior* to the Tartar conquest that Europeans had access to various commercial marts on the eastern coast, and only after that event that they were shut out in the most effectual manner.

"He who subdues men by force (says Mencius) is a tyrant; he who subdues them by philanthropy is a king. Those who subdue by force do not subdue the heart; but those who subdue men by virtue gain the hearts of the subdued, and their submission is sincere." He at the same time explains very well the necessity for governments, as well as for the inequalities in the conditions of different orders of society. It may be questioned whether the argument could be better put than in his fourth book, where the illustration he makes use of demonstrates, at the same time, the advantages resulting from the *division of labour*. Let it be remembered that this was all written more than two thousand years ago. In reply to the objection that one portion of the community is obliged to produce food for the other,† "Does the farmer (asked

* Explained in the Commentary as *tyranny*.

† Chap. v. sec. 4.

Mencius) weave the cloth or make the cap which he wears?—No; he gives grain in exchange. Why does he not make them himself?—It would injure his farming.—Does he make his own cooking-vessels or iron implements for farming?—No; he gives grain in barter for them: the labour of the mechanic and that of the husbandman ought not to be united. Then (says Mencius), are the government of the empire and the business of the farmer the only employments that *may* be united?—There are employments proper to men of superior station, as well as to those in inferior conditions. Hence it has been observed, some labour with their minds, and some with their bodies. Those who labour with their minds *rule*, and those who labour with their bodies are *ruled*." This is exactly Pope's line—

"And those who think still govern those who toil."

The commentary appended to the foregoing in the Chinese work proceeds to add,—"The mutual benefit derived by these different classes from each other's exertions resembles the advantage that results to the farmer and mechanic from the exchange of their respective produce. Hence it is proved that the exemption of some from manual labour is beneficial to the whole community." It appears from the book of Mencius that the Chinese have always considered the ground as the original source of all wealth, and the principal subject of taxation. Agriculture is called the *root*, and manufactures and trade the *branches*, and hence the higher honours and attention bestowed on the former.

After the 'Four Books' come the 'Five Canonical Works,' called *King*, of each of which Confucius was either the author or compiler. 1. The *Shy-king*, or Book of Sacred Songs, has been described by the author of this

work in the Royal Asiatic Transactions,* as a collection of about three hundred short poems selected by Confucius himself, after rejecting the licentious pieces, which were numerous. The earliest poetry of China, like that of all other nations, appears to have consisted of songs and odes, intended occasionally to be accompanied by music. They have the following notion of the nature of poetical language:—"The human feelings, when excited, become embodied in words; when words fail to express them, sighs or inarticulate tones succeed; when these are inadequate to do justice to feeling, then recourse is had to song." The Book of Songs is divided into four portions, of which the first, the largest and most interesting, is called *Kuŏ-foong*, "the manners of different states;" that is, of the states into which a portion of the present empire was then divided. These had all of them a kind of feudal dependence on one sovereign, who, in order to possess himself of the best means of estimating the character and sentiments of the various people more or less under his sway, was furnished with the songs and odes most popular in each of them. This agrees in a singular manner with the following remark of a writer in the 'Spectator:' †—"I have heard," says he, "that a minister of state, in the reign of Queen Elizabeth, had all manner of books and ballads brought to him of what kind soever, and took great notice how much they took with the people; upon which he would, and certainly might, very well judge of their present disposition, and of the most proper way of applying them according to his own purposes." The bulk of these curious vestiges of antiquity in China do not rise beyond the most primitive simplicity; and their style and language, without the minute commentary that accompanies

* 4to. vol. ii., *On the Poetry of the Chinese.*

† No. 502.

them, would not be always intelligible at the present day. This commentary, however, explains and elucidates their meaning, and, by means of the historical associations which it serves to convey, renders these songs the favourite study of the better informed at the present remote period. Every well-educated Chinese has the most celebrated pieces by heart, and there are constant allusions to them in modern poetry and writings of all kinds.

The second and third parts of the ancient Book of Songs are said to have been composed for the purpose of being sung or recited on state occasions. They treat of the great and virtuous actions of heroes and sages, or express their sentiments. The fourth and last portion of the ancient poetical canon is called *Soong*, that is, eulogies or panegyrics on the ancestors of the dynasty Chow, then filling the throne, and on the great personages of antiquity. They appear to have been a species of hymn, sung before the emperor when he sacrificed as *pontifex maximus* (always the peculiar office of Chinese sovereigns) in the temples of Heaven and Earth, or in the hall of his ancestors. Whatever may be the real character of the Shy-king on the score of poetical merit, it is at least curious as having been compiled more than twenty centuries prior to our time, and some portion of it composed at a still earlier period.*

2. The *Shoo-king*, which is the next of the 'Five Canonical Works,' is considered by the Chinese as imperfect, and accordingly obscure in many parts, only fifty-eight sections remaining out of one hundred. The rest were perhaps destroyed in the great bonfire of books, by which the first universal emperor, Chy-hoang-ty, made himself so celebrated. The Shoo-king is a history of the deliberations between the two emperors Yaou and Shun, and those

* Royal Asiatic Transactions, vol. ii. p. 422.

persons whom Confucius styles the *ancient kings* (rulers of petty nations or states), whose maxims are quoted by him as the models of perfection. Their notions of good government are founded on certain principles, sufficiently good in themselves, and "which being observed, there is order;—if abandoned, there is anarchy." "It is vain to expect (they add) that good government can proceed from vicious minds." Here again one is occasionally surprised (as in the precepts of Confucius and Mencius themselves) to meet with maxims which could be hardly anticipated as the groundwork of a mere Asiatic despotism. They rather prove, in fact, that, if administered and preserved in strict accordance with its theory, the government of China is based in a great measure on public opinion.* When the people (in the Shoo-king) rise against the tyranny of him with whom the *Hea* dynasty closed, they are justified by the maxim, that "the *people's hearts* and *Heaven's decree* are the same;" which is nothing else, in fact, than *vox populi vox Dei.*

We have before had occasion to notice the account contained in the Shoo-king of a general inundation (by some identified with the universal deluge), whose waters were drained off by the exertions of the great *Yu* in the course, it is said, of nine years. This, together with other circumstances attending the Chinese account of the event, leads rather to the inference that it was only an aggravation of those fearful inundations to which the extensive country watered by the Yellow River (descending at once from the hills of Tartary into an immense alluvial plain) is even *now* constantly liable. There is, indeed, fair ground for concluding that the course of that great

* A philosopher of some celebrity left behind him these three maxims regarding government:—"First, to choose proper men; secondly, to consult the wishes of the people; thirdly, to act according to the times."

stream near the sea has, at some remote period, been changed, and that it must once have emptied itself into the gulf of Pechely, north of the Shantung promontory.* The unparalleled quantity of mud which its waters hold in suspension is now forming deposits, impeding its exit into the sea, and annually causing inundations by throwing the stream back upon the flat country. It is more than possible that the choking of the ancient embouchure caused the deluge of *Yaou;* and a second deluge may be caused by the stoppage of the present exit.

3. The Book of Rites, *Ly-king* which is the next in order, may be considered as the foundation of the present state of Chinese manners, and one of the causes of their uniform unchangeableness. Exterior forms were highly estimated by the earliest teachers of the country, on the ground of their being calculated to soften men's manners, and restrain their natural proneness to excess and violence. They observed that, the tempers and dispositions of all being different, the *Ly* (or rules of propriety in relation to external conduct) became necessary in order to harmonize such opposite characters, and reconcile their differences. Hence it has been the constant endeavour of Chinese moralists and rulers to stifle everything like passion in its birth, and to reduce all to a tranquil dead level. The ceremonial usages of the country are com-

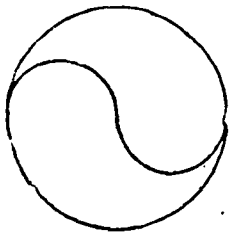
* In the book of Mencius it is stated (chap. v. sec. 4) that Yu, in the course of eight years, removed the obstacles which choked several rivers, so that they flowed into the sea, and that he opened a vent for others into the Keang. Mr. Collie, the Protestant missionary, who translated the Four Books, remarks that (according to this account) the country had been overflowed from the creation of the world down to the period in question, and that the water was put into proper channels by human efforts. "These circumstances (he adds) deserve the consideration of such persons as have supposed that the Chinese writers alluded to the universal deluge." Mr. Collie seems quite right, *except* in the supposition that the inundation was primæval: it was more likely to be accidental.

monly estimated to amount to *three thousand*, as prescribed in the ritual; and one of the Six Boards or tribunals at Peking, called *Ly-poo*, is especially charged with the guardianship and interpretation of these important matters, which really form a portion of the religion of the Chinese.

4. The *Chun-tsieu*, a history of his own times and of those which immediately preceded them, was the last, and perhaps, strictly speaking, the only, *original* work of Confucius. Its object appears to have been to afford warnings and examples to the rulers of the country, reproving their misgovernment, and inculcating the maxims of the "ancient kings" for their guidance. This work commences about 750 years before our era, and concludes with the events which immediately preceded the death of the philosopher. Having been commenced in spring and concluded in autumn, the *Chun-tsieu* derives its name from this circumstance; and such are the fanciful names frequently given by the Chinese to their literary productions. We believe that this work has never yet been wholly translated into any European language. The opinion given by Père Prémare of the Chinese histories in general is perhaps the real reason why they do not bear the labour or expense of a detailed version. *In ultimo gradu pono historicos, non quòd male scribunt, sed quia non admodum curo scire facta quæ referunt*—"I rank their historians the last in order, not on account of any intrinsic inferiority, but because I do not take the same interest in the facts which they relate."

5. The last that we have to notice of the Canonical Works is the *Yĕ-king*, which is a mystical exposition of what some consider as a very ancient theory of creation, and of the *changes* that are perpetually occurring in nature, whence the name of the work. The system may

doubtless be extremely ancient in its origin, but little can be gathered from the *Yĕ-king*, the most oracular of performances; and this philosophy has been greatly added to in later times by the commentator *Choo-tsze*, and others who flourished in the eleventh century of our era, when the learned dynasty of Soong governed China. The arithmetic diagrams of Fo-hy, as we find them in the Yĕ-king, bear some resemblance to the mystical numbers of the Greek philosopher Pythagoras, who, although he enlarged the bounds of science, appears to have allowed his speculations to be perverted by dreams of mysterious virtue in certain numbers and combinations. In the same way the Chinese make use in divination, and various other branches of their mock philosophy, of the *Pa-kua*, or eight diagrams of Fo-hy, which, if they mean anything, may be supposed to represent a system of binary arithmetic. Chinese philosophers speak of the origin of all created things, or the *premier principe matériel* (as it has been called in French translations) under the name of *Tae-keih*. This is represented in their books by a figure, which is thus formed:



On the semidiameter of a given circle describe a semicircle, and on the remaining semidiameter, but on the other side, describe another semicircle. The whole figure represents the *Tae-keih*, and the two divided portions, formed by the curved line, typify what are called the *Yâng* and *Yin;* in respect to which, this Chinese mystery bears a singular parallel to that extraordinary fiction of Egyptian mythology, the supposed intervention of a masculo-feminine principle in the development of the *mundane egg*.* The *Tae-keih* is said to have produced the *Yâng* and

* This idea seems to have been very general. "In a mysterious

Yin, the active and passive, or male and female principle, and these last to have produced all things. The Heaven they call *Yâng*, the Earth *Yin*,—the Sun is *Yâng*, the Moon *Yin*,—and in the same manner the supposed analogy is carried throughout all nature. One might sometimes be led by their definitions of the *Tae-keih*, to suppose it an intelligent being; but the general drift of the system is plainly material, as it does not discriminate between the creature and the Creator. This dogma of materialism, however ancient it may be in its first origin, became especially cultivated, or, according to some, *originated* in China, during the *Soong* dynasty, which preceded the Mongol Tartar conquest. The learning and science of the Chinese, such as it was, being then much in vogue, some celebrated commentators on the ancient books appeared about that time, the most famous of whom was the *Choo-tsze* before named. At length, under Yoong-lo, of the *Ming* dynasty, and in the fourteenth century, a joint work was composed, by name *Sing-ly-tâ-tseuen*, or a complete exposition of nature, in which the mystery of a Tae-keih was fully treated of. Choo-tsze thus expressed himself:—"The celestial principle was male, the terrestrial female: all animate and inanimate nature may be distinguished into masculine and feminine; even vegetable productions are male and female, as, for instance, there is female *hemp*, and male and female *bamboo*. Nothing exists independent of the *Yin* and *Yâng*." Although the Chinese do not characterise the sexes of plants, and

passage of the Yajur-veda, Brahma is spoken of, after his emanation from the golden egg, as experiencing fear at being alone in the universe: he therefore willed the existence of another, and instantly he became masculo-feminine. The two sexes thus existing in one god were immediately, by another act of volition, divided in twain, and became man and wife. This tradition seems to have found its way into Greece; for the 'Androgyne' of Plato is but another version of this Oriental mythus."—*The Hindoos*, vol. i. p. 166.

arrange them systematically as we do after Linnæus, they use the above phraseology in regard to them; nor do they confine it to the vegetable and animal creation only, but extend the same to every part of nature.* *Numbers* themselves have their genders: a *unit* and every odd number is male; *two* and every even number female.

The above might, with no great impropriety, be styled "a sexual system of the universe." They maintain that, when from the union of the *Yâng* and *Yin* all existences, both animate and inanimate, had been produced, the sexual principle was conveyed to, and became inherent in, all of them. Thus heaven, the sun, day, &c., are considered of the male gender; earth, the moon, night, &c., of the female. This notion pervades every department of knowledge in China. It exists in their theories of anatomy and medicine, and is constantly referred to on every subject. The chief divinities worshipped by the emperor, as high-priest of the state religion, are Heaven and Earth, which in this sense appear to answer in some degree to *ουρανος* and *γη* in the cosmogony of the Greeks.

Of *Tien*, or Heaven, they sometimes speak as of the Supreme Being, pervading the universe, and awarding moral retribution: and it is in the same sense that the emperor is styled "the Son of Heaven." At other times they apply the term to the visible sky only. Heaven stands at the head of their *moral* as well as *physical* system, and most of the attributes of the Deity are referred to it. The common people colloquially apply to it a term of respect, equivalent to *venerable father*, or *Lord*; and *Choo-tsze* himself says on one occasion, that "Heaven means God." *Ty*, the earth, is called by the Chinese

* Chinese Gleaner, vol. ii. p. 144.

mother, in the same way that *Tien*, heaven, is styled *father*; and between these two all sublunary things are said to have been produced.

The combinations of double and single lines contained in the Yĕ-king, and denominated *Kuâ*, may be seen depicted on the circles of the Chinese mariner's compass. Of these Dr. Morrison observed that they are called the signs, forms, or species of all things in nature, and seem somewhat like the intelligible numbers of Pythagoras, as the monad, duad, and so forth, of which nothing either certain or important is now known. Some have spoken of these numbers as "the archetype of the world;" others, in language much more like that of the Chinese, call them "the symbolical representations of the first principles and forms in nature." But what is meant in either case it is not easy to determine. Whatever use Pythagoras made of his "intelligible numbers," the only intelligible use that is made of them in China is for the purposes of imposture in fortune-telling or divination.

The same writer remarked that, with the Confucians of China, the gods appeared to hold by no means an undivided supremacy, the saints or sages (*shing-jin*) seeming to be of at least equal importance. Confucius admitted that he did not understand much respecting the gods, and therefore he preferred being silent on the subject: and Choo-foo-tsze (or Choo-tsze) affirmed that sufficient knowledge was not possessed to say positively that they existed; but he saw no difficulty in omitting the subject altogether. Though the sages in China did not claim for themselves an equality with heaven, they yet talk of each other in a way that sounds like blasphemy. Heaven and earth (they say) produced man, but the work was incomplete; men were to be taught the

principles of reason, which heaven and earth could not do; the work of the sages was equally great, and therefore heaven, earth, and the sages form a triad of powers equal among themselves.* The Chinese division of human knowledge (it may be remarked) is into *Heaven*, *Earth*, and *Man*. "The *Joo-keaou*, or sect of the learned (adds Dr. Morrison), which is so miserably deficient respecting the Deity, is almost entirely silent respecting the immortality of the soul, as well as future rewards and punishments. Virtue is rewarded, and vice punished, in the individuals, or in their posterity, on earth; but of a separate state of existence they do not speak." †

Among the sages of China, none perhaps holds a much higher rank in general estimation than the celebrated commentator Choo-foo-tsze. In the embassy of 1816 we visited the spot which had been consecrated by the abode of this person, and which, from the natural beauties of the situation, possesses attractions of no ordinary kind. On the west of the Poyang lake, near the city *Nan-kang-foo*, is a range of mountains, consisting principally of mica-slate, in which are embedded great quantities of garnets, the whole in a state of rapid disintegration. The mica existed in such abundance, that our entire pathway, as the sun shone upon it, was in a blaze of light. At no great distance the Chinese were working large quarries of fine granite. Near the bottom of a beautiful cascade,

* "Then," says Confucius, "the sage is united with heaven and earth, so as to form a triad. To be united with heaven and earth means to stand equal with heaven and earth. These are the actions of the man who is by nature perfect, and who needs not to acquire perfection by study." It may be observed that the emperors of China are principally included in this list.

† Their philosophy makes man consist of a *hing*, figure, or visible body, and *ky*, spirit, or animating principle. While the union continues, the body remains sensible, and their separation is death.

which fell in a crystal column from a great height, was the commencement of a most romantic valley, in which, at a little distance from the foot of the mountains, was the spot formerly inhabited by the philosopher: it was called "the Vale of the White Deer," from a circumstance in his history. The most remarkable object, in the Temple there erected, was a figure of Confucius, of whom the complexion was represented as quite black. On the tablet below his feet was inscribed, "The altar of the deified Confucius, the most holy teacher of ancient times." In one of the halls, at present used as a school-room for young students, were five large tablets, inscribed with the most noted precepts of the sage. There were also the two following inscriptions on either side of the entrance:—"Since the time of Choo-tsze, learning has flowed as from an authentic fount." "By studying in the retirement of the mountains and waterfalls, man returns to the primitive goodness of his nature."

That the Chinese believe in the existence of an *innate moral sense*, seems implied in this passage from Mencius:—"If you remark the natural dispositions, you may see that they are towards virtue; hence I say that man's nature is virtuous. All men have (originally) compassionate hearts; all men have hearts that feel ashamed of vice; all have hearts disposed to show reverence and respect; and all men have hearts that can discriminate between right and wrong. A compassionate heart implies benevolence; one ashamed of vice, rectitude; one which respects and reveres, a sense of propriety;* and one that clearly distinguishes right from wrong, wisdom. Now the principles of benevolence, rectitude, propriety, and wisdom are not infused into us from without; we certainly possess them of ourselves." It will be remarked that these

* *Ly*, the word applied to their ceremonies.

notions are quite opposed to our own doctrine of original sin and human depravity.

This notice of the state religion of China may be concluded by the following sketch of the principal objects of worship, and other points connected with it, abstracted from the detailed account contained in the 'Chinese Repository,' a work printed at Canton.* The state-worship is divided into three classes:—first, the *Ta-sze*, or great sacrifices; secondly, the *Choong-sze*, or medium sacrifices, and lastly, the *Seaou-sze*, or lesser sacrifices. Under the first head are worshipped the Heaven and the Earth. In this manner they would seem to adore the material and visible heaven, as contrasted with the earth; but they at the same time appear to consider that there exists an animating *intelligence* which presides over the world, rewarding virtue and punishing vice. *Tien* and *Shang-ty*, "the supreme ruler," appear always to be synonymous in the Shoo-king. Equal with the above, and like them restricted to the worship of the emperor and his court, is the great Temple of Imperial Ancestors. If the Chinese sovereigns are thus deified, we may recollect similar examples of madness and folly in the Roman emperors, one of whom, still farther to outrage the common sense of mankind, made his horse a consul; and even the "conquering son of Ammon" himself was not exempt from those disorders of the brain which infest the giddy heights of human prosperity. In China, however, this extravagance is rather the part of a *system*, calculated by design to work upon the feelings and opinions of the multitude, than the mere result of individual caprice and vanity.

The objects of worship entitled to the "medium sacrifices" are (among others) the gods of the land and grain. The former are generally represented by a rude stone,

* Vol. iii. p. 49.

placed on an altar with matches of incense burning before it, which is commonly seen in every street and corner. The Sun and Moon, otherwise called the "Great light" and the "Evening light," come under this head. The rest are various—gods, genii, sages, and others, the inventors of agriculture, manufactures, and useful arts. The God of letters stands principal among these. The "lesser sacrifices" include a still larger class, among which is the ancient patron of the healing art, together with innumerable spirits of deceased statesmen, eminent scholars, martyrs to virtue, &c. The principal phenomena of nature are likewise worshipped, as the clouds, the rain, wind, and thunder, each of which has its presiding god. The *five mountains*, the *four seas*, are rather figurative than exact expressions for the land and the ocean in general. Like the Romans, they worship their military flags and banners: and *Kuân-ty*, a deified warrior of ancient times, much honoured by the military, is especially adored by the present dynasty for his supposed assistance. Their right being that of conquest, they properly worship the god of war. *Loong-wâng*, the Dragon king, who represents rivers and the watery element, receives much sacrifice from those who have charge of the Yellow River and Grand Canal, both of which so frequently burst their banks; and his temples were constantly recurring during the progress of the embassies through the country.

Among others of the same class of gods is "the Queen of Heaven," *Tien-how*,* concerning whom the legend says that she was a native of the province of Fokien, and distinguished in early life for her devotion and celibacy. She became deified during the thirteenth century under the Soong dynasty, and, having originated in a maritime province, she is the peculiar patroness of seafaring people,

* Worshipped also by the Budhists.

who erect altars and temples to her on shore, and implore her protection on the water. She is supposed to have the control of the weather; and in seasons of severe drought the government issues proclamations, commanding a general fast and abstinence from animal food: the local magistrate, in his official capacity, goes to the temples, and remains fasting and praying for successive days and nights, supplicating for rain. In no country are the vicissitudes of the seasons more irregular, nor the inconveniences resulting from them more severe, than in some parts of China.

That the material universe is the object of worship appears not only from the names of those several parts which have been given above, but also from other circumstances. Thus the imperial high-priest, when he worships heaven, wears robes of an azure colour, in allusion to the sky. When he worships the earth, his robes are yellow, to represent the clay of this earthly sphere. When the sun is the object, his dress is red; and for the moon, he wears a pale white. The kings (*wâng*), nobles, and crowd of official hierophants, wear their court dresses. The altar of sacrifice to heaven is round, to represent the sky; that on which the sacrifices to earth are laid is square, but whether for a similar reason is not stated. The priests of the Chinese state religion, subordinate to the emperor himself as *pontifex maximus*, are the kings, nobles, statesmen, and the crowd of civil and military officers. The *Joo-keaou*, or philosophic sect, monopolize both the civil and sacred functions. At the grand state-worship of nature, neither priests nor women are admitted; and it is only when the especial sacrifice to the patroness of *silk* takes place that the empress herself, and the several grades of female rank at Peking, may take a part.

"It is required of the Chinese hierophants that they be

free from any recent legal crime, and not in mourning for the dead. For the first order of sacrifices they are required to prepare themselves by ablutions, a change of garments, a vow, and a fast of three days. During this time they must occupy a clean chamber, and abstain—1, from judging criminals; 2, from being present at a feast; 3, from listening to music; 4, from cohabitation with women; 5, from intercourse with the sick; 6, from mourning for the dead; 7, from wine; 8, from eating onions or garlic; for," says the annotator, "sickness and death defile, while banqueting and feasting dissipate the mind, and unfit it for holding communion with the gods."

The victims sacrificed consist of oxen, sheep, and pigs; and the other offerings are principally silks.* It is required that the victims be whole and sound, and a black colour is preferred. The times of sacrifice are specified thus:—those to heaven are offered at the winter solstice; those to earth at the summer solstice; and the others at regularly appointed periods. The punishment annexed to the neglect of due preparation, imperfect victims, &c., is either forfeiture of salary for a month or longer, or a specified number of blows with the bamboo, which may be commuted for the payment of a very small sum of money, according to the *number of blows* adjudged to the delinquent; which, as in other cases throughout the penal code, may often be considered rather as a *measure of the offence* than as a specification of the *real penalty* inflicted. The case is far different it the common people presume to arrogate the right of worshipping heaven, for they are punished in such cases with eighty blows, and even with strangulation.

Notwithstanding the general aspect of materialism that

* These, as well as the flesh of the sacrifices, are probably divided among the worshippers eventually.

pertains to the Chinese philosophy, it is difficult to peruse their sentiments regarding *Tien* (heaven) without the persuasion that they ascribe to it most of the attributes of a supreme governing intelligence. The work above quoted contains, in another place, the translation of the prayer of the reigning emperor Taou-kuâng, on the occasion of a long drought with which the whole country had been afflicted in the year 1832.* The following extract will show at once the responsibility which attaches to the conduct and administration of the emperor, and the notions of a Supreme Being associated with the Chinese ideas of *Tien:* —"I, the minister of heaven (says the emperor), am placed over mankind and made responsible for keeping the world in order, and tranquillizing the people. Unable as I am to sleep or eat with composure, scorched with grief, and trembling with anxiety, still no genial and copious showers have yet descended. * * * * * I ask myself whether in sacrificial services I have been remiss? whether pride and prodigality have had a place in my heart, springing up there unobserved? whether from length of time I have become careless in the affairs of government? whether I have uttered irreverent words, and deserved reprehension? whether perfect equity has been attained in conferring rewards and inflicting punishments? whether, in raising mausoleums and laying out gardens, I have distressed the people and wasted property? whether, in the appointment of officers, I have failed to obtain fit persons, and thereby rendered government vexatious to the people? whether the oppressed have found no means of appeal? whether the largesses conferred on the afflicted southern provinces were properly applied, or the people left to die in the ditches? * * * * Prostrate, I beg Imperial Heaven to pardon my ignorance and dulness, and to grant me

* Chinese Repository, vol. i. p. 236.

self-renovation; for myriads of innocent people are involved by me, a single man. My sins are so numerous that it is hopeless to escape their consequences. Summer is past, and autumn arrived—to wait longer is impossible. Prostrate, I implore Imperial Heaven to grant a gracious deliverance," &c.

It was the opinion of some among the Jesuits in China that the better portion of the learned in that country had not given way to the material and atheistical system current during the Soong dynasty, but adhered strictly to the ancient religion, in which a supreme and creative intelligence was acknowledged under the title of *Tien*, or *Shang-ty*.* The Confucian philosophers consisted, according to them, of two sects. First, of those who disregarded the modern commentators and philosophists, and retained the same notions regarding the Creator of the universe that had been handed down from remote antiquity. Secondly, of those who puzzle themselves with the speculations of Choo-tsze and his school, as they appear in the work before mentioned, and endeavour to explain the phenomena of nature by the operation of material causes. Others of the Romish missionaries were persuaded that *all* the Chinese learned were no better than atheists, and that, notwithstanding the express declaration of the Emperor *Kâng-hy*, in his communications with the pope, wherein he averred that it was *not* to the visible and material heaven that he sacrificed, but to the true Creator of the universe, no faith could be placed in their explanations. We have before remarked that the Romish fathers, however much they may have extolled the wealth, civilization, and resources of China, have generally viewed the moral and religious character of the people in a somewhat pre-

* The supreme ruler. Keying, in his correspondence, frequently appealed to this power in proof of his sincerity.

judiced light; and the commercial adventurers from Europe, confined in their communications with the people to the neighbourhoods of seaports, unable commonly to gain correct information from books, and treated by the government as barbarous intruders, have been sufficiently predisposed to give way to unfavourable impressions.

CHAPTER XV.

ASIATIC

RELIGION—BUDHISM.

Three systems of religion or philosophy — Indian history of Budhism — Its introduction into China — Its five precepts — Its resemblance to popery — Monastery near Canton — Pagodas — Chinese objections to Budhism — Debtor and creditor account in religion — Present condition of Budhism in China — Pagan and Romish practices — Chinese account of Christ — Sacred language — Paradise and hell — Budhist doctrines — Chinese Budhism.

WHEN a Chinese is asked how many systems of philosophic or religious belief exist in his country, he answers, *Three*—namely, *Yu*, the doctrine of Confucius, already noticed; *Fŏ*, or Budhism; and the sect of *Taou*, or "Rationalists." It must not, however, be inferred that these three hold an *equal rank* in general estimation. Confucianism is the orthodoxy, or state religion, of China; and the other two, though tolerated as long as they do not come into competition with the first, have been rather discredited than encouraged by the government. "First (it is observed in the Sacred Instructions) is the honourable doctrine of the *Yu*, and then those of *Fŏ* and *Taou*. Respecting these latter, Choo-tsze has said the doctrine of Fŏ regards neither heaven nor earth, nor the four regions. Its only object is the establishment of its sect, and the unanimity of its members. The doctrine of Taou consults nothing more than individual enjoyment and preservation.

The religion of Fŏ,* or, as it is pronounced at Canton,

* This has been constantly confounded with the name of the ancient emperor *Fo-hy*.

Fut'h, is that of Bud'h, in the precise shape which that superstition has assumed throughout Thibet, Siam, Cochin-China, Ava, Tartary, and Japan. The extensive dissemination of Budhism in countries foreign to India, its original birthplace, must necessarily be ascribed in a great measure to the rancorous persecution it experienced from the Brahmins, whose hatred towards this heresy gave rise, as soon as they became the predominant sect, to the most cruel treatment of the *reformers*, for such the Budhists appear at first to have been. About one thousand years before the Christian era an extraordinary man appeared in India, who laboured with unceasing assiduity, and not without success, to reform the popular superstitions, and destroy the influence of the Brahmins. This was Budha, whom the Brahmins themselves regard as an avatar of Vishnu. The efforts of Budha were exerted to bring back the religion of his country to its original purity. He was of royal descent, but chose an ascetic life, and embraced the most abstruse system of philosophy prevalent in India. Many princes, among others the celebrated Vikramâditya, who reigned in the century that preceded the commencement of our era, adopted the faith of Budha, and, as far as their influence extended, obliterated the influence of the Brahmins and the system of castes. It is certain, however, that the learned adherents of the Brahminical religion did not remain silent spectators of what they deemed (*or at least called*) the triumph of atheism. They contended with their equally learned opponents, and this dispute, as is manifest by the tendency of many of the works still read by the Hindoos, called forth all the talents of both sides; but here, as in innumerable other instances, the arm of power prevailed, and, as long as the reigning monarchs were Budhists, the Brahmins were obliged to confine themselves to verbal

contentions. At length, about the beginning of the sixth century of our era, an exterminating persecution of the Budhists began, which was instigated chiefly by Cumavila Bhatta, a fierce antagonist of their doctrine, and a reputed writer on Brahminical theology. This persecution terminated in almost entirely expelling the followers of the Budhist religion from Hindoostan; but it has doubtless contributed to its propagation in those neighbouring countries into which it had previously been introduced through the intercourse of commerce and travel.*

The above is the Indian history of Budhism. According to the Chinese, it was introduced into their empire about sixty-five years after the commencement of our era, during the reign of Ming-ty, of the Hân dynasty. That monarch, considering a certain saying of Confucius to be prophetic of some saint to be discovered in the west, sent emissaries to seek him out. On reaching India, they discovered the sect of Budhists, and brought back some of them with their idols and books to China. The tradition is, that Budha was both king and priest in a country of the west, with a queen whom he made a divinity: that he was obliged to abdicate his power and seek a secluded retreat for twelve years, after which he taught the dogma of the metempsychosis, or transmigration of souls, making that the vehicle of a system of rewards and punishments hereafter. He is said ultimately to have regained his power, and to have departed this life at an advanced age, being transformed at once into the god Fŏ, or Budha. It is a common saying of his disciples, that "Fŏ is one person, but has three forms," which are represented by three distinct gilded images, called the "Three precious or pure Budhas." The mother of the god is said to have dreamed that she had swallowed an elephant, whence the venera-

* The Hindoos, vol. i, p. 175.

tion for elephants in Siam and Pegu. Budha's character as a reformer is indicated by the Chinese legend, that he aimed at instructing men "to amend their conduct and practise virtue."

The five principal precepts, or rather interdicts, of Budhism must be understood as being addressed to the priests alone, or to those who devote themselves to the god. They are the following:—1. Do not kill living creatures. 2. Do not steal. 3. Do not marry. 4. Speak not falsely. 5. Drink no wine. The *Shamans*, *Hoshângs*, or priests, are associated together in monasteries attached to the temples of Fŏ. They are in China precisely a society of mendicants, and go about like the monks of that description in the Romish church, asking alms for the support of their establishments. How much their costume resembles that of the Romish priesthood, may be seen by the annexed cut, from original Chinese drawings done at Canton.

Mondicant Priest of Budha.

Their tonsure extends to the hair of the whole head. There is a regular gradation among the priesthood, and, according to his reputation for sanctity, his length of service, and other claims, each priest may rise from the lowest rank of *servitor*, whose duty it is to perform the

menial offices of the temple, to that of officiating priest, and ultimately of *Tae Hoshâng*, abbot or head of the establishment. The curious resemblance that exists between the observances of the Budhist priests of China and Tartary, and those of the Romish church, has excited the surprise of the missionaries from the latter; and the observations and surmises of Père Gerbillon, who was intimately acquainted with the subject, may by some be considered as worthy of attention. He questioned a well-informed Mongol as to the time when his countrymen had first become devoted to the Lama of Thibet, who is a spiritual sovereign closely resembling the pope. The reply was, that priests first came into Mongol Tartary in the time of Koblai Khân, but that these were really persons of holy and irreproachable lives, unlike the present. The father supposes that they might have been religious Christians from Syria and Armenia, the communication with which countries being subsequenty cut off by the dismemberment of the Mongol empire, the Budhist priests mixed up their superstitions with the Romish observances. Certain it is (and the observation may be daily made even at Canton) that they now practise the ordinances of celibacy, fasting, and prayers for the dead; they have holy water, rosaries of beads which they count with their prayers, the worship of relics, and a monastic habit resembling that of the Franciscans. They likewise kneel before an idol called Tien-how, *queen of heaven*. These strange coincidences led some of the Romish fathers to conjecture that the Chinese had received a glimpse of Romish Christianity, by the way of Tartary, from the Nestorians; others supposed that St. Thomas himself had been among them; but Père Prémare was driven to conclude that the devil had practised a trick to perplex his friends the Jesuits. To those who admit that most of

the Romish ceremonies and rites are borrowed directly from paganism* there is less difficulty in accounting for the resemblance.

Chinese history relates that, about the middle of the tenth century, the emperor Kien-tĕ, who founded the Soong dynasty, sent three hundred Shaman or Budhist priests into India, on purpose to procure the books and relics of the god. After passing the river *Heng-ho* (Gunga, or Ganges) they saw a large image of Fŏ in the south. In the homilies of the priests there often occurs this sentence: —"Oh Fŏ, existing in forms as numerous as the sands of the *Heng-ho*." Their books mention a country called *Sy-lân* (Ceylon), in which, near the sea, there is on a certain mountain (Adam's Peak) the print of a foot three cubits in length. At the base of the hill is a temple, in which the real body of Fŏ is said to repose on its side; and near it are teeth and other *relics* of Budha, called by the priests *Shay-ly*. It is but justice to the Chinese to say that, in importing some of the Indian deities and their superstitions, they have wisely left behind *all* the indecencies and fanatic madness of Indian worship, and that such horrors as those enacted at Juggernath and elsewhere could never in the slightest degree be practised under a government like that of China.

One of the principal objects of curiosity at Canton is a temple and monastery of Fŏ, or Budha, on a very considerable scale, situated upon the southern side of the river, just opposite to the European quarter. It is said that towards the close of the last Chinese dynasty, and about A.D. 1600, a priest of great sanctity raised the reputation of the temple which had been for some time before established in that place; and a century afterwards, when the Manchows had taken possession of Peking, the

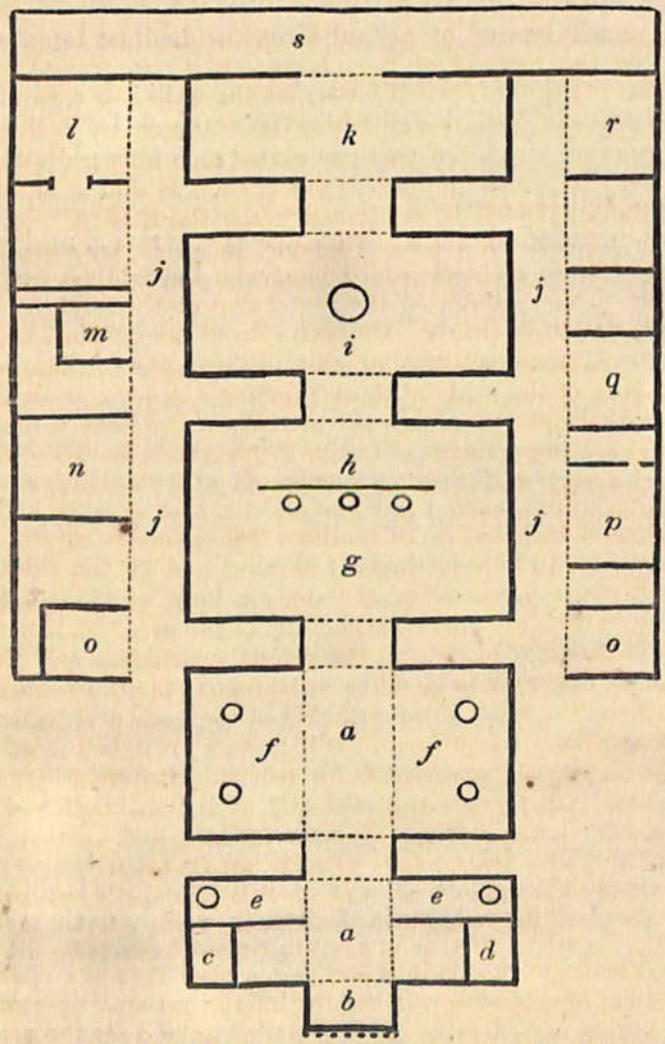
* See Dr. Conyers Middleton's Letter from Rome.

son-in-law of Kâng-hy, who had been sent to subdue Canton, and was therefore called "Subjugator * of the South," took up his residence in the temple, which he at length patronized and greatly enriched. The funds soon sufficed to maintain a crowd of priests who established themselves there with their monastic discipline; and it has been a place of consideration ever since. "I visited one evening," says Mr. Bennett,† "the temple, situated at a short distance on the opposite side of the river to that on which the factories are built. Having crossed with my companions in a boat, we proceeded a little way down the river, and landed at a dirty causeway near some timber-yards, in which a quantity of fir-timber of various dimensions was piled with an extreme degree of regularity. The entrance to the temple or temples, and extensive grounds about them, was close to the landing-place; and passing some miserable fruit and eating stalls adjoining, we noticed a large clean open space planted with trees, and having in the centre a broad pavement of granite kept very clean. The quietness that reigned within formed a pleasing retreat from the noise and bustle without. This paved way brought us to the first portico; here we beheld on huge granite pedestals a colossal figure on each side, placed there as guards of the entrance to the temple of Budha; the one on the right in entering is the warrior Chin-ky, and on the left is Chin-loong. After passing these terrific colossal guards we entered another court somewhat similar to the first, also planted with trees, with a continuation of the granite footpath, which led (through several gateways) to one of the temples. At this time the priesthood were assembled, worshipping, chanting, striking

* *Ping-nan.* For the true meaning of *Tae-ping*, the title assumed by the insurgent leaders of 1850, see Chap. V. p. 175.

† Wanderings, &c., vol. ii. p. 107.

gongs, arranged in rows, and frequently performing the *Ko-tow* in adoration of their gilded, senseless deity. * * * * * The priests, with shaven crowns, and arrayed in the yellow robes of their religion, appeared to go



Plan of Budhist Monastery near Canton.

a a is a handsome paved way of considerable breadth, leading through the middle of the space occupied by the temple, and composed of large slabs of granite, well laid down;—*b*, the *hill gate*, as it

through the mummery with devotion. They had the lowering look of bigotry, which constant habit had at last legibly written upon their countenances. * * * * * As soon as the mummery had ceased the priests all

is called, though erected on a dead level, the Budhist temples being generally in the recesses of mountains;—*c*, *d*, two raised recesses, with various inscriptions in gilt letters on the walls;—*e e*, two colossal figures of gigantic divinities guarding the entrance;—*f f*, the hall of the four celestial kings, each of them seated on a lofty pedestal, and as large as the two preceding figures; one of them is said to be the benefactor of the temple before mentioned under the title of "Subjugator of the South;"—*g*, the principal temple, in which are seen, fronting the entrance, three colossal gilded images of the Budhist triad, called the "Three precious Budhas," the round spot on the forehead of each marking their Indian origin. On each side of the entrance are seated gilded figures, on a much smaller scale, of the *eighteen Lohân*, or saints, who take care of the souls of those that die. A huge drum and bell serve, in this temple, to *awaken the attention* of the gods to their worshippers;—*h*, a single image of Omito Fŏ, or Amida Budha;—*i*, temple containing a very well-executed monument of a vase-like shape and gigantic dimensions, carved in white alabaster, or gypsum, and sacred to the *relics* (called *Shay-ly*) of Budha. The whole is surrounded by lanterns and lamps kept continually burning, and on the sides of the monument stand bowls of consecrated or holy water, said to be a specific for various disorders, particularly of the eyes;—*j*, long covered passages or cloisters, leading to the priests' apartments and offices;—*k*, temple of *Kuân-yin*, a goddess worshipped chiefly by women;—*l*, apartments of the chief priest or abbot of the monastery, where Lord Amherst's embassy was lodged in 1816;—*m*, a great bell struck morning and evening;—*n*, apartments for receiving visitors, where may be seen an idol with many arms, evidently of Indian origin;—*o o*, two pavilions, containing images of Kuân-foo-tsze, and another warrior demigod, to whom the present dynasty attributes its success;—*p*, a place devoted to the preservation of animals, principally pigs, presented by the votaries of the temple. A chief tenet of this religion is to spare animal life. *q*, a book-room and a printing-press, exclusively devoted to the sacred books of the Budhist sect;—*r*, a place for idols, near which are a number of miserable cells for the inferior priests;—*s*, on this side there extends a considerable space of walled ground for the growth of kitchen herbs, and containing, besides, a mausoleum, where are seen a number of jars, in which are deposited the ashes of the priests after their bodies have been burned. Here, too, is the building in which the act of cremation is performed. To the left of the temple are a variety of offices, as the kitchen, common room, &c. &c..

flocked out of the temple, adjourned to their respective rooms, divested themselves of their official robes, and the senseless figures were left to themselves with the lamps burning before them."

The annexed ground-plan of the temple and monastery may serve to convey some idea of the nature and extent of this old establishment.

The nine-storied pagodas of China, of which that in Kew Gardens is a poor copy (the originals being more lofty, if not more substantial), are connected with the religion and worship of Fŏ, bearing about the same relation to a temple that the *campanile*, or bell-tower, does to a church in Italy. Images of that deity, and of the various gods and saints associated with him, are found in niches of the wall, in mounting the spiral staircase which conducts to the summit. Although Budha is not now worshipped in India, he is at least considered as the ninth incarnation of Vishnu. It may therefore be conjectured that the *nine* stories of the pagodas in question have some reference to this circumstance, the real meaning of the number never having been exactly ascertained. Again, in our progress through the interior, with Lord Amherst's embassy, pagodas with only *seven* stories were met with; and it is possible that this number may convey a mystical allusion to the *seven* Budhas who are said to have existed at different periods. Wherever these pagodas are in good repair (for many are mere ruins), they are found attached to extensive establishments partaking of the nature of foundations, with a portion of their revenues derived from land adjoining. They are enriched by the contributions and bequests of their votaries, and most of them support a crowd of idle and ignorant priests; but the government has nothing to do with their maintenance. The books of the Budhist religion, which are read and chanted in these establish-

ments, are partly translated into Chinese from the originals in the Pâli language, a dialect of the Sanscrit: and in the person of the Grand Lama of Thibet (whose soul on quitting the body is supposed instantly to animate that of an infant) the doctrine of transmigration is said to be practically illustrated.

The indifference, and even repugnance, which is displayed by the government of China Proper towards the professors of Budhism,* becomes quite altered on the other side of the Great Wall towards Mongol Tartary. When Gerbillon was sent by the emperor in company with a Chinese mission beyond the wall, one of the principal Lama priests did not come out of his tent, nor even send a civil message to the representatives of the emperor, who (no doubt with authority from the sovereign) performed a sort of adoration to the living idols. These, in their swinish laziness and stupidity, are supposed to display a kind of mystical abstraction from mundane affairs, and an absorption into the divine nature of Fŏ. The truth seems to be, that a faith which is good enough for the barbarous and ignorant nomades of Tartary is not so well suited to the comparatively enlightened and sensible Chinese, with whom the rational system of Confucius (with all its faults and imperfections) must ever hold the supreme rank, even under a Tartar dynasty whose native religion is Budhism.

It is specifically urged against the doctrines of Fŏ by the Confucians, that they unfit men for the business and duties of life, by fixing their speculations so entirely on another state of existence as to lead some fanatics to hang or drown themselves in order to anticipate futurity; nay, two persons have been known to commit suicide together

* The *Tae-ping* insurgents made short work of all they fell in with, professing as they did to exterminate idolatry.

with a view to becoming man and wife in the next world. The priests are sometimes accused of employing their superstitious arts in seducing women; societies of women at least, called *Ny-koo*, a species of nuns or female devotees, are encouraged by them. The tricks occasionally made use of by the priests resemble the practices of the fakirs in India. Le Comte tells a story of a bonze who went about in a vessel stuck full of nails (something like that in which the Carthaginians are said to have shut up Regulus), and, pretending that it was a merit to relieve him from his pain, he sold these nails to the devout at so much per head.

Their notion of total abstraction, or quietism, seems to aim at getting rid of all passions, even of thought itself, and ceasing to be urged by any human desires; a species of mental annihilation. Certainly, to judge by its effects on the priests, the practice of Budhism appears to have a most debasing influence. They have, nearly all of them, an expression approaching to idiotcy, which is probably acquired by that dreamy state in which one of their most famous professors is said to have passed nine years with his eyes fixed upon a wall! They say, with reference to their system of moral retribution, that what a man receives now is an indication of his conduct in a former state; and that he may augur his future condition by his behaviour in this life. The merit, however, would seem to consist as much in inaction as action, in the abstinence from evil, or the mere self-infliction of pain, as the practice of good. They make up an account with heaven, and demand the balance in bliss, or pay it by sufferings and penances of their own, just like the papists of Europe.

Independently, however, of Budhism, the Chinese have a great idea of the efficacy of charitable and merciful acts, and of the merit of alms-giving. "The good and evil

deeds of the fathers (they say) will be visited on the children and grandchildren." The emperor himself, on occasions of drought and public calamities, or when some of the imperial house are ill, grants general pardons and amnesties. The same ideas are attached to public fasts, when a severe interdict is laid on the slaughter of animals, and no meat can be offered for sale. Such was the case at Canton in 1834, on the occurrence of the inundations. The system of promiscuous almsgiving is one principal encouragement to beggary. It has been mistakenly asserted that there are no beggars in China, while there are, in fact, a great many, notwithstanding the religious attention paid to the claims of kindred. Beggars are seldom turned away from houses and shops without a trifle, which they extort by their whining and persevering importunities.

In a work of some note on morals, called 'Merits and Demerits examined,' a man is directed to keep a debtor and creditor account with himself of the acts of each day, and at the end of the year to wind it up. If the balance is in his favour, it serves as the foundation of a stock of merits for the ensuing year; and if against him, it must be liquidated by future good deeds. Various lists and comparative tables are given of both good and bad actions in the several relations of life; and benevolence is strongly inculcated in regard, first, to man, and, secondly, to the brute creation. To cause another's death is reckoned at one hundred on the side of demerit; while a single act of charitable relief counts as one on the other side. This method of *keeping a score* with heaven is as foolish and dangerous a system of morality as that of penances and indulgences in the Romish church. To save a person's life ranks, in the above work, as an exact set-off to the opposite act of taking life away; and it is said that this deed of merit

will prolong a person's life twelve years. A pretty correct idea of Chinese moral sentiment might be gathered from the scale of actions there given. To repair a road, make a bridge, or dig a well, ranks as ten; to cure a disease, as thirty; to give enough ground to make a grave, as the same; to set on foot some very useful scheme or invention, ranks still higher. On the other hand, to reprove one unjustly counts as three on the debtor's side; to level a tomb, as fifty; to dig up a corpse, as one hundred; to cut off a man's male heirs, as two hundred; and so on. These notions are not peculiar to the Budhist sect, but prevail universally among the Chinese, who are as little troubled with sectarian divisions and animosities as any people in the world, simply from a feeling of general indifference.

A paper by the Rev. Mr. Gutzlaff, in the second volume of the 'Chinese Repository,' contains a very correct account of Budhism as it now exists in the celestial empire. He observes of the priests, that they scarcely address themselves to the understanding, "but are content with repeating the prayers delivered to them in the Pâli, to them an unintelligible language; and they pay their adoration to an indefinite number of images, according to the traditions of their religion. In China, where the peculiarity of the language precludes its being written with alphabetic accuracy, the Pâli degenerates into a complete jargon," wherein the sound is imperfectly preserved, and the meaning wholly lost. Mr. Gutzlaff tried in vain to decipher the hard words, and, after all his inquiries among the priests, succeeded so little in satisfying himself, that he was obliged to relinquish the point. They seem, in fact, to repeat their prayers altogether by rote, and to be ignorant of the meaning of a very considerable portion of their sacred books.

Budhism having been, as before observed, invited into China about the middle of the first century of our era, the progress of its professors is thus explained by the same writer:—"Accommodating their system to all the existing superstitions, they opened the door to every sort of converts, who might retain as many of their old prejudices as they chose. They were by no means rigorous in enforcing the obligations of men to morality. To expiate sins, offerings to the idols and to the priests were sufficient. A temple built in honour of Fŏ, and richly endowed, would suffice to blot out every stain of guilt, and serve as a portal to the blessed mansions of Budha. When death approached, they promised to every one of their votaries speedy promotion in the scale of the metempsychosis, till he should be absorbed in Nirupan or Nirvâna—nonentity. With these prospects the poor deluded victim left the world. To facilitate his release from purgatory, they said mass, and supplied the wants of the hungry departed spirit by rich offerings of food, which the priests in reality devoured. As Confucius had raised veneration towards ancestors into idolatrous* worship, they were ready to perform the office of priests before the tablets of the dead.

"But notwithstanding their accommodating creed, the Chinese government has at times disapproved of it. As the importance of marriage has been acknowledged in China from time immemorial, and almost every person at years of maturity been obliged to enter that state, the celibacy of the priesthood of Fŏ was considered a very dangerous custom. Budha regarded contemplation and exemption from worldly cares as the nearest approach to bliss and perfection; therefore his followers passed lives of indolence, and practised begging as the proper means

* Not exactly idolatrous. They sacrifice to the invisible spirit, and not to any representation of it in the figure of an idol.

of maintaining themselves. This was diametrically opposed to the political institutions of China, where the emperor himself sets the example of holding the plough. If such a system prevailed extensively, the immense population of the empire must be reduced to starvation, for it is only by the utmost exertion that it can subsist. These serious faults in the foreign creed gave occasion for its enemies to devise its extirpation. It was proscribed as a dangerous heresy, and a cruel persecution followed, but it had taken too deep root to be easily eradicated. Then again some emperor would think more favourably of its tendency, and even adopt it himself. Yet the natural consequence of its tenets was, that it could never become a religion of the state, and that the priests were never able to exercise any permanent influence over the populace. Besides, the Chinese are too rational to believe implicitly all the absurd Budhistic fables, nor can they generally persuade themselves that those numerous images are gods. When we add to this their national apathy towards everything concerning religion, from their being entirely engrossed by the affairs of this life, we can easily account for the disesteem in which they hold Budhism."

The present condition in China of the religion of Fŏ is very far from flourishing, and the extensive and magnificent establishments, which have been founded in former times, are evidently in a state of dilapidation and decay. It is rarely that one meets with any of their nine or seven storied pagodas in tolerable repair, though one or two of these striking and elegant objects occur in almost every landscape. Between Macao and Canton there are no less than four or five nine-storied pagodas on elevated points by the river-side, and every one of them is in a state of ruin. They serve, however, as admirable landmarks in the navigation of the river. The monasteries, or establish-

ments of mendicant priests, are generally found in the most romantic spots of the hilly country. One of these particularly attracted the attention of both our embassies from its remarkable situation; and Lord Macartney has given a description of it which must be admitted to be somewhat beyond the reality. This temple of the goddess *Kuân-yin* (one of the principal idols of the Budhists) is seated in the face of a perpendicular limestone cliff, at least five hundred feet in height, and can be approached only by boats, as it rises abruptly from the side of the river about three or four days' journey above Canton. The natural fissure or cavern in the rock has been enlarged by human labour; and the abodes of the priests and idols consist of several chambers, one above the other, which are severally approached by stairs and shelving portions of the limestone. In front of the middle story hangs an enormous mass of stalactite, at least a ton in weight, threatening destruction to all who approach the temple from below.

The resemblance which we have already noticed between the ritual of Fŏ in these temples, and the Roman Catholic ceremonies, had excited the attention of Mr. Gutzlaff. "That they should count their prayers by means of a rosary, and chant masses for both the living and the dead; that they should live in a state of celibacy, shave their heads, fast, &c., might be perhaps accounted for as a mere coincidence of errors into which men are prone to fall: but their adoration of *Tien-how*, 'the Queen of Heaven' (called also *Shing-moo*, 'the Holy Mother'), must be a tenet engrafted upon Budhism from foreign traditions. We are unable to fix the exact date of the adoption of this deity. There is a legend of modern date among the people of Fokien, which tells us that she was a virgin of that province, who in a dream

saw her kindred in danger of being wrecked, and boldly rescued them; but this affords no satisfactory solution. It is likely that some degenerate Nestorian Christians amalgamated with their faith and ceremonies the prevailing errors of China, and caused the priests of Budha to adopt many of their rites." In one instance that missionary saw a marble bust of *Napoleon*, before which incense was burnt in a temple; hence, he adds, it would not be extraordinary if they had also adopted among their other idols so conspicuous an object of worship as the Virgin is among Romanists.

In corroboration of this surmise may be adduced a very curious account of Christ, taken by Dr. Milne from the Chinese mythological history, in which Jesus is ranked among the number of the gods.* That the account was received by the Chinese from the Romish mission seems indisputably proved by the epithets applied to the Virgin, and the virtues and powers attributed to her. The work in which it appears is called 'A Complete History of Gods and Genii,' and was compiled in two-and-twenty thin octavo volumes by a Chinese physician, during the reign of Kâng-hy, at a time when many priests of Rome were in China. "The extreme western nations say, that at the distance of ninety-seven thousand *ly* from China, a journey of about three years, commences the border of Sy-keang. In that country there was formerly a virgin named Ma-le-a. In the first year of Yuen-chy, in the dynasty Hân, a celestial god reverently announced to her, saying, 'The Lord of heaven has selected thee to be his mother.' Having finished his discourse, she actually conceived, and afterwards bore a son. The mother, filled with joy and reverence, wrapped him in a cloth, and placed him in a horse's manger. A flock of celestial gods

* Chinese Gleaner, p. 105.

(angels) sang and rejoiced in the void space. Forty days after, his mother presented him to the holy teacher, and named him Yay-soo. When twelve years of age, he followed his mother to worship in the holy palace. Returning home they lost each other. After three days' search, coming into the palace, she saw Yay-soo sitting on an honourable seat, conversing with aged and learned doctors about the works and doctrines of the Lord of heaven. Seeing his mother, he was glad, returned with her, and served her with the utmost filial reverence. When thirty years of age, he left his mother and teacher, and, travelling to the country of Yu-teh-a, taught men to do good. The sacred miracles which he wrought were very numerous. The chief families, and those in office in that country, being proud and wicked in the extreme, envied him for the multitude of those who joined themselves to him, and planned to slay him. Among the twelve disciples of Yay-soo there was a covetous one named Yu-tah-sze. Aware of the wish of the greater part of his countrymen, and seizing on a proffered gain, he led forth a multitude at night, who, taking Yay-soo, bound him and carried him before Ana-sze in the court-house of Pelah-to. Rudely stripping off his garments, they tied him to a stone pillar, inflicting on him upwards of 5400 stripes, until his whole body was torn and mangled; but still he was silent, and like a lamb remonstrated not. The wicked rabble, taking a cap made of piercing thorns, pressed it forcibly down on his temples. They hung a vile red cloak on his body, and hypocritically did reverence to him as a king. They made a very large and heavy machine of wood, resembling the character *ten*,* which they compelled him to bear on his shoulders. The whole way it sorely pressed him down, so that he moved

* The Chinese write ten with an upright cross.

and fell alternately. His hands and feet were nailed to the wood, and, being thirsty, a sour and bitter drink was given him. When he died, the heavens were darkened, the earth shook, the rocks, striking against each other, were broken into small pieces. He was then aged thirty-three years. On the third day after his death, he again returned to life, and his body was splendid and beautiful. He appeared first to his mother, in order to remove her sorrow. Forty days after, when about to ascend to heaven, he commanded his disciples, in all a hundred and two, to separate, and go everywhere under heaven to teach, and administer a sacred water to wash away the sins of those who should join their sect. Having finished his commands, a flock of ancient holy ones followed him up to the celestial kingdom. Ten days after, a celestial god descended to receive his mother, who *also* ascended up on high. Being set above the nine orders, she became the empress of heaven and earth, and the protectress of human beings."

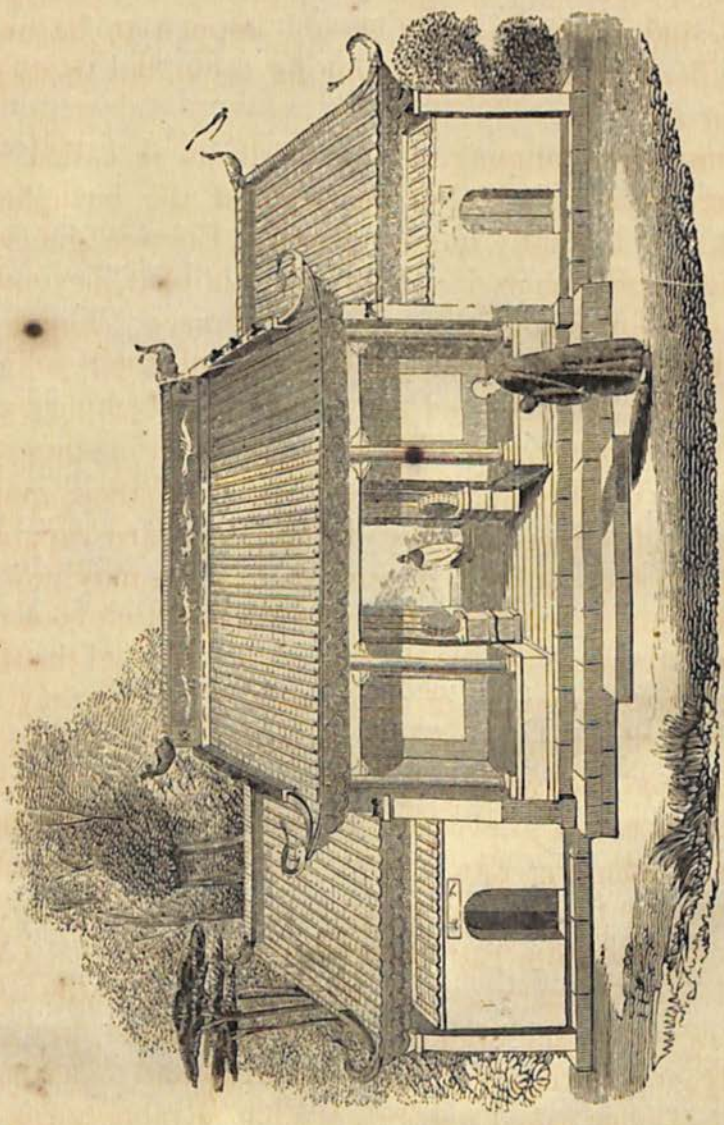
There appears, upon the whole, some ground for supposing that the legend of Fokien province, concerning the *Queen of Heaven*, may have had its origin in the Romish accounts of the Virgin Mary, since the title by which the Chinese designate their goddess is *Tëen-how Neang*, "Our Lady the Queen of Heaven." On the other hand, the Chinese at Canton, who are fond of finding parallels and resemblances of the kind, give the name of the Virgin (in conversing with Europeans) to their Budhist idol *Kuân-yin;* and in the same way apply the name of *Kuân-yin* to the Romish idols of the Virgin. To every saint who has a church at Macao they contrive to give a name, founded on some supposed analogy in their own idols. St. Anthony they call "the fire god." There is nothing in the Romish worship at that place, or in the character of the priests, that is

calculated to give the Chinese a very exalted idea of this corruption of Christianity. In the former, they witness graven or molten images, processions, tinkling of bells, candles and incense, exactly resembling their own religious rites; in the latter, a number of ignorant and idle monks, professing celibacy, but with indifferent moral characters, shaving their heads and counting beads very much after the fashion of the Budhist priests. A few Romish missionaries still make converts of the lowest and poorest Chinese, who occasionally appear at the churches and receive each of them a small donation of rice, for which reason they are sometimes called in Portuguese "rice Christians."

The curious resemblance between the practices of Budhism and the Romish church goes still farther. Dr. Milne, whose zeal and talents accomplished much in a little time, but whose labours were cut short by an untimely death, supplied the following observations to the 'Chinese Gleaner:'*—"There is something to be said in favour of those Christians who believe in the magic powers of foreign words, and who think a prayer either more acceptable to the Deity, or more suited to common edification, because the people do not generally understand it. They are not singular in this belief. Some of the Jews had the same opinion; the followers of Budha, and the Mahomedans, all cherish the same sentiment. From the seat of his holiness at Rome, and eastward through all Asia to the cave of the Jammaboos of Japan, this sentiment is espoused. The bloody Druids of ancient Europe, the naked gymnosophists of India, the Mahomedan Hatib, the Hoshâng (Budhist priests) of China, the Romish clergy, and the bonzes of Japan,—all entertain the notion that the mysteries of religion will be the more revered the

* Vol. iii. p. 141.

less they are understood, and the devotions of the people (performed by proxy) the more welcome in heaven for their being dressed in the garb of a foreign tongue. Thus



Gateway of Budhist Temple near Canton.

the synagogue, the mosque, the pagan temple, and the Romish church seem all to agree in ascribing marvellous efficacy to the sounds of an unknown language; and as

they have Jews, Mahomedans, and Pagans on their side, those Christians who plead for the use of an unknown tongue in the services of religion have certainly a host, as to number, in support of their opinion. That Scripture, reason, and common sense should happen to be on the other side, is indeed a misfortune for them, but there is no help for it.

"The sacred language of the Budhists is called 'The language of *Fân*,' which is the name of the birthplace of Budha. It is totally unknown to the Chinese generally, and the priests themselves know nothing of it, beyond the sound of a few favourite words and phrases. There are, it is true, glossaries attached to some of their religious books, which are designed to explain these technical shibboleth; but the definition is sometimes given in other technical terms equally unintelligible, and from their general ignorance of letters very few of the priests are capable of consulting such helps. Among them there may now and then be found a scholar, and some have written books, but as a body they are extremely ignorant. Beyond the stated and occasional lessons of their Liturgy, which they have learned to repeat by rote, they have very little knowledge of books, and many of them cannot read. As a sect, however, they profess to cherish the most profound veneration for the language of Fân. They ascribe miraculous effects to the use of the written character and of the oral language, and consider both to be of celestial origin. To the repetition of the bare sounds, without regard to the meaning, they attach the highest importance; hence they occasionally go over the same words hundreds and thousands of times. I once asked a priest, 'What advantage can you expect to derive from merely repeating a number of words, with the sense of which you are entirely unacquainted?' His answer was, 'True, I do not know the sense—it is

profound and mysterious; yet the benefit of often repeating the sounds is incalculable; it is infinite!'

"Let us now attend for a moment to the sentiments of the Malays on the same subject. Their religious opinions are derived from the Korân, the principles of which they profess to imbibe, and daily observe its ceremonies. No language but the Arabic is allowed in their public religious services, and, though there be not one in a hundred Malays that understands it, they tenaciously stick to it, and consider worship as profaned by the use of any other. Let them speak for themselves. 'The Arabic language possesses superlative glory in the Islam religion, and no other can be allowed in the Mahomedan mosques. If prayers be offered in the Malay, Javanese, Buggis, Bornean, Hindoostanee, or other languages, they are rendered profane and useless. The Arabic is that in which the Mahomedan faith was first given. The angel Gabriel was commanded by God to deliver the words of the Koran exclusively in Arabic to the prophet Mahomed.'"

But to return to Budhism. The paradise of Fŏ includes those circumstances of sensual indulgence which the founders of most false religions have promised to their votaries; but unlike the elysium of Mahomed, no *houries* are to be supplied to the saints of Budhism, for even the women that are admitted there must first change their sex. "The bodies of the saints reproduced from the lotus* are pure and fragrant, their countenances fair and well formed, their hearts full of wisdom, and without vexation. They dress not, and yet are not cold; they dress, and yet are not made hot. They eat not, and yet are not hungry; they eat, and yet are not satiated. They are without pain, irritation, and sickness, and they become not

* The lotus is a favourite type of creative power, and representations of it perpetually occur in connexion with Budhism.

old.* * * * * * They behold the lotus flowers and trees of gems delightfully waving, like the motion of a vast sheet of embroidered silk. On looking upwards, they see the firmament full of the To-lo flowers, falling in beautiful confusion like rain. The felicity of that kingdom may justly be called superlative, and the age of its inhabitants is without measure. This is the place called the paradise of the west."

The hell of the Chinese Budhists may be described from a translation,* made by Dr. Morrison, of the explanatory letterpress on ten large woodcuts, which are exhibited on particular occasions in the temples, and copies of which have been mistaken sometimes in Europe for the criminal punishments of China, giving rise to very unfounded notions of penal jurisdiction in that country. Prior to their final condemnation, the souls are exposed to judgment in the courts of the *Shĕ-ming-wâng*, "the ten kings of darkness."† The proceedings in these courts are represented exactly after the manner of the Chinese judicial trials, with the difference in the *punishments*, which in these pictures of the infernal regions are of course sufficiently appalling. In one view are seen the judge with his attendants and officers of the court, to whom the merciful goddess *Kuân-yin* appears, in order to save from punishment a soul that is condemned to be pounded in a mortar. Other punishments consist of sawing asunder, tying to a burning pillar of brass, &c. Liars have their tongues cut out; thieves and robbers are cast upon a hill of knives; and so on. After the trials are over, the more eminently good ascend to paradise; the middling class return to earth in other bodies, to enjoy riches and honours; while the wicked are

* Chinese Gleaner, vol. iii. p. 288.

† There is a festival to the honour of these about the month of August. See Festivals, vol. i. p. 354.

tormented in hell, or transformed into various animals, whose dispositions and habits they imitated during their past lives.

One of the emperors of the Ming dynasty, who was much attached to the Budhist tenets, and who meditated sending, about the commencement of the 16th century, an ambassador with expensive presents to India, for the purpose of bringing some of the most learned of that sect to court, to explain their doctrines, was addressed by one of his ministers in the following strain :—"That for which the people of the world most honour and love *Shakia* himself amounts to this, that he continued to teach his doctrines during the space of forty years, and that he died aged eighty-two. This was indeed a great age, but the years of Shun were a hundred and ten ; those of Yaou a hundred and twenty. Supposing that your majesty's extreme affection for the sect of Fŏ springs from a genuine wish to discover the good way, I venture to entreat your majesty not to love the name merely, but to seek diligently the reality ; not to regard the end only, but carefully to search for the principle ; and not to seek them from Fŏ, but from the spotless sages ; not from foreigners, but in our own country. Could your majesty be persuaded to regard our sacred sages with the same ardour with which you love Fŏ, to seek the doctrines of Yaou and Shun with the earnestness which leads you to those of Shakia, there will be no need to send many thousand miles to the happy land of the west, for the object is at hand, and before your eyes.* * * * I adduce the testimony of Confucius, who says, 'The very moment that I desire to be virtuous, the attainment is made.' " &c. It is by arguments allied to these that the introduction of foreign innovations has perpetually been restrained and checked in China, although occasionally, as in the case of Budhism, they

have been tolerated, and for short periods gained some strength.

We may include within our sketch of Chinese Budhism some extracts from Mr. Hodgson's account* of that religion, as he found it in the 'Bauddha Scriptures of Nipal,' much nearer to its source, and greatly better understood, than it is in China. The primary motive for doing good, and worshipping Budha, according to these scriptures, is the hope of obtaining absorption into the nature of the god, and being freed from transmigrations. Between the highest class of votaries and Budha there is no difference, because they will eventually become Budhas. Those who do good from the fear of hell are also above the class of sinners, and their sufferings will be lessened; but they will be constrained to suffer several transmigrations, and endure pain and pleasure in this world, until they obtain *mukti*, or absorption.

The mystic syllable AUM is not less reverenced by the Budhists than the Brahmins; but the latter apply it to their own *Trimurti*, or Triad of *Brahma*, *Vishnu*, and *Siva*; while by the former it is applied to *Budha*, *Dharma*, and *Sanga*, which is the Triad represented by the three gilded images in the Canton temple, described at pages 44, 45, and alluded to in the Chinese books, when they say that "Fŏ is one person, but has three forms." Their scriptures contain in native characters, which imitate as nearly as possible the Sanscrit sounds, the following invocation to the Triad, *Namo Buddhâya*, *Namo Dharmâya*, *Namah Sangâya—Om!* that is to say, "Adoration to Buddha, adoration to Dharma, adoration to Sanga—AUM!" concluding thus with the mystical monosyllable which represents the three terms united in

* Royal Asiatic Transactions, vol. ii. p. 232.

one sign.* The three divinities are called by the Chinese "the three pure, precious, or honourable Fŏ," concerning whom Rémusat has given the following explanation:—"According to the interior doctrine, *Buddha*, or the Intelligence, produced *Dharma*, the Law, and the two united constituted *Sanga*, the Union, or combination of several. According to the public doctrine, these three terms are still the Intelligence, the Law, and the Union; but considered in their external manifestations, the intelligence in the Buddhas to come, the law in the writings revealed, and the union in the multitude of the believers, or the assembly of *priests*. Hence it arises that the last have, among all the Buddhist nations, the title of *Sanga*, united, which, being abridged in the Chinese pronunciation, has formed the word *Seng*, rendered by the missionaries 'bonze,' but which signifies literally, ecclesiastic. Such are the sense and the origin of this well-known word, the etymology of which has not before been investigated."

The same writer has the following observation concerning the goddess *Kuân-yin*, one of the most important divinities in the Budhist mythology:—"De Guignes (he says), wishing to explain the Chinese names of *Poo-sa* and *Kuân-she-yin*, adduces a passage from Kircher, who supposes that the being to whom these names are applied is Nature, and calls her the Cybele of the Chinese. He remarks that she is also called *Lotus-eyed, and born of the lotus flower.* Kuân-yin, then, he concludes, is the Lakshmi of the Indians. Rémusat, with apparent reason, combats this notion, and gives his own explanation in the following terms:†—The supreme intelligence (Budha) having by his thought (Dharma) produced union or multiplicity (Sanga), from the existence of this Triad arose

* Abel Rémusat, sur la Doctrine Samanéenne, p. 27.
† Observations, p. 51.

five abstractions or intelligences of the first order, that is, Budhas, each of which produced an intelligence of the second order, *Bhodisatua.** It is from this name that the Chinese have, by abbreviation, formed that of *Poo-sa*, common not only to these five secondary intelligences, but to all the souls which have attained the same degree of elevation. *Kuân-she-yin*, or *Kuân-yin*, is placed in the first rank; but *Padmanetra* (Lotus-eyed) is the name of another divinity of the same kind. The Sanscrit name of the former (Kuân-yin) is Padmapâni, who represents, on account of her productive power, the second term of the Triad, and in the exterior doctrine is characterized by several signs of a female divinity. It is certain that no idol in China is more honoured than Kuân-yin.†

In the name of *Poo-ta-la*, a temple, or rather monastery, described in Lord Macartney's mission, may be recognised the Chinese pronunciation of Budha. This extensive establishment, which was found in Manchow Tartary beyond the Great Wall, is described as a quadrangular structure of considerable height, each of its sides measuring two hundred feet, and the whole building affording shelter to no less than eight hundred priests or lamas.‡ In the square court or quadrangle within is a gilded chapel, with representations of the Triad, and the whole description assimilates it, though on the largest scale, to the monasteries in Nipal, as they are described by Mr. Hodgson. "The vihar is built round a large

* *Poo-te-să-to*, an Indian word introduced with the Budha sect; now, according to the genius of the Chinese language, contracted to *Poo-sa*."—*Morrison's Chinese Dictionary*, part ii. p. 682.

† M. Rémusat observes very truly that Chinese Budhism can only be duly investigated by comparing the Chinese versions with the Sanscrit texts, and thus combining two departments of learning which have not as yet been united in the same person.

‡ Staunton, vol. ii. p. 258.

quadrangle or open square, two stories high; the architecture is Chinese. Chaitya properly means a *temple* of Budha, and vihar an abode of his cœnobitical followers. In the open square in the midst of every vihar is placed a chaitya; but those words always bear the senses here attached to them, and vihar can never be construed temple; it is a convent or monastery, or religious house." Poo-ta-la, then, is a vihar, with a chaitya within the quadrangle.

The Chinese pronunciation of Budha seems also apparent in the name *Poo-to*, applied to an island of the Chusan group, in latitude 30° 3′, and longitude 121°, where Mr. Gutzlaff* visited one of the largest establishments dedicated to Fŏ and his priests; a place of such note as to be the resort of numerous votaries from remote parts. "At a distance (says he) the island appeared barren and scarcely habitable; but as we approached it we observed very prominent buildings and large glittering roofs. A temple, built on a projecting rock, beneath which the foaming sea dashed, gave us some idea of the genius of its inhabitants in thus selecting the most attractive spot to celebrate the orgies of idolatry. We were quite engaged in viewing a large building situated in a grove, where we observed some priests of Budha walking along the shore, attracted by the novel sight of a ship. Scarcely had we landed when another party of priests, in common garbs and very filthy, hastened down to us chanting hymns. When some books were offered them, they exclaimed, 'Praise be to Budha!' and eagerly took every volume that I had. We then ascended to a large temple, surrounded by trees and bamboos. An elegant portal and magnificent gate brought us into a spacious court, which was surrounded with a long range of buildings

* Journal of a Voyage along the Coast of China, 1832-33.

not unlike barracks, being the dwellings of the priests. On entering it, the huge images of Budha and his disciples, the representations of Kuân-yin, the goddess of mercy, and other idols, with the spacious and well-adorned halls, exhibit an imposing sight to the foreign spectator.

"The high-priest requested an interview. He was a deaf old man, who seemed to have very little authority, and his remarks were commonplace enough. We afterwards followed a paved road, discovering several other

Officiating Priest of Budha.

smaller temples, till we came to some high rocks, on which we found several inscriptions hewn in very large letters.* One of them stated that China has sages. The excavations were filled with small gilt idols and superscriptions. On a sudden we came in sight of a still larger temple, with yellow tiles, by which we immediately

* This is a common practice of visitors, who employ artists to cut these gigantic letters very deep into the face of the rocks. The embassy of 1816 met with them near the Poyang lake.

recognised it as an imperial endowment. A bridge, very tastefully built over an artificial tank, led to an extensive area paved with quarried stones. Though the same architecture reigned in the structure of this larger building as in the others, we could distinguish a superior taste and a higher finish. The idols were the same, but their votaries were far more numerous; indeed, this is the largest temple I have ever seen. The halls, being arrayed with all the tinsel of idolatry, presented numerous specimens of Chinese art.

"The colossal images were made of clay, and tolerably well gilt. There were great drums and cylindrical bells in the temple. We were present at the vespers of the priests, which they chanted in the Pâli language, not unlike the Latin service of the Romish church. They held their rosaries in their hands, which rested folded upon their breasts. One of them had a small bell, by the tinkling of which their service was regulated; and they occasionally beat the drum and large bell to rouse Budha's attention to their prayers. The same words were a hundred times repeated. None of the officiating persons showed any interest in the ceremony, for some were looking around, laughing and joking, while others muttered their prayers. The few people who were present, not to attend the worship, but to gaze at us, did not seem in the least degree to feel the solemnity of the service. Though the government sometimes decries Budhism as a dangerous doctrine, we saw papers stuck up, wherein the people were exhorted to repair to these temples in order to induce Heaven to grant a fertile spring; and these exhortations were issued by the emperor himself. What inconsistency!

"On the island are two large and sixty small temples which are all built in the same style; and the idol of

Kuân-yin holds a prominent station. We were told that upon this spot, not exceeding twelve square miles, 2000 priests were living. No females are allowed to live on the island, nor any layman suffered to reside there, except in the service of the priests. To maintain this numerous train of idlers, lands on the opposite island have been allotted for their use, which they farm out; but as this is still inadequate, they go upon begging expeditions, not only into the surrounding provinces, but even as far as Siam. From its being a place of pilgrimage, also, the priests derive great profits. To every person who visits this island it appears at first like a fairy land, so romantic is everything that meets the eye. Those large inscriptions hewn in solid granite; the many temples that appear in every direction; the highly picturesque scenery itself, with its many-peaked, riven, and detached rocks; and, above all, a stately mausoleum, the largest which I have ever seen, containing the bones and ashes of thousands of priests, quite bewilder the imagination." *

* As the Poo-to island closely adjoins Chusan, it was a place of frequent resort to the British during our five years' occupation.

CHAPTER XVI.

RELIGION—TAOU SECT.

Laou-keun, the Chinese Epicurus — His sect — Fragment of old romance — 'The philosopher and his wife' — Origin of Voltaire's 'Zadig' — Superstitions — Fatalism — Illustrative tale — Charms and talismans — Belief in ghosts illustrated — Omens — Divination.

THE *third* religious or philosophic persuasion that has established itself in China is that of *Taou*, or of *Laou-keun*, which was the name, or rather title, of the founder. This person appeared nearly simultaneously with Confucius, by whom he is mentioned about 560 years before the Christian era. As far as can be gathered of the real drift of his doctrines, he seems to have inculcated a contempt of riches and honours, and all worldly distinctions, and to have aimed, like Epicurus, at subduing every passion that could interfere with personal tranquillity and self-enjoyment. As death, however, was something that they could not pretend to despise, his disciples and successors set themselves to work to invent an elixir of long life, or of immortality, and thus became in time a species of *alchymists*. They have been alternately favoured and persecuted at different periods of Chinese history, but seem to have flourished most under the Soong dynasty, subsequent to the tenth century of our era, a period when all speculative opinions, and every species of spurious learning, were most in vogue.

The principal commentator on the works of Confucius speaks of *Laou-keun*, or, as he is sometimes styled, *Laou-tsze*,* with little respect, and calls him "an ignorant good man." He is there described as a recluse, who was distinguished by his humility, uprightness, simplicity of life, and exemption from cares and passions. He taught and practised a weak inactivity and neglect of the world and its concerns, loving neither fame, nor pleasure, nor business. It is reasonable to suppose that the principal fabric of that doctrine which now distinguishes the professors of the Taou sect was the work of those who succeeded Laou-keun, and made use of his name as the foundation of their system. They call him "the original ancestor, or founder honoured of heaven;" and the account given of him in popular books is, that he was an incarnation of some superior being, and that there is no age in which he does not come forth among men in human shape. They tell the various names under which he appeared, from the highest period of fabulous antiquity down as late as the sixth century, making in all seven periods.† In imitation, perhaps, of the Budhist Triad, the followers of Taou have also their own Triad, which they denominate "the Three pure ones." This threefold source and supreme ruler is represented as presiding in heaven among the assembled gods, the sun, moon, stars, and constellations, and delivering his name, accompanied by many epithets of benevolence and mercy, to the "great barefooted angel," to be promulged in the lower world, that, amongst men, all who see and recite that name may attain infinite happiness and complete deliverance from all evil. Their principal scripture is the *Taou-tĕ-king*, a Latin version of which exists in the library of the Royal Society.

* The legend says he was born with white hair, and thence called *Laou-tsze*, "the old infant."

† Morrison's Dictionary, Part I. p. 582.

Besides the practice of alchymy, to which they were led in their search for the elixir of long life, the disciples of Laou-keun have at different times professed the science of magic, and their arts of imposition were, at various periods of Chinese history, practised upon the sovereigns of the country. Under the Tâng dynasty this superstition gained such credit that the title of *Tien-sze*, "Celestial doctors or teachers," was conferred on its professors: a superb temple was erected to Laou-keun, and his image placed in it. It is said that the representatives of the head of the sect have still a large establishment in the province of Keang-sy, where numbers flock from all parts to obtain cures for diseases or to learn their destinies. The sect appears, in fact, to have degenerated very much from the character and tenets of the original founder, and many who wear the garb of the Taou-sze are at present little better than cheats and jugglers, professing to have communication with demons. The chief point of distinction in garb between them and the rest of the Chinese is the mode in which they dress their hair, which is fastened at the top of the head by means of a pin or skewer, somewhat after the fashion of the people of Loo-choo. It is by many degrees the least popular or predominant sect of China; its superstitions now engage only a few of the most ignorant, and the Taou-sze are but rarely seen.

In proof of the puerile nature of the superstitions which have occupied this sect, we may produce an extract from an original Chinese work, the history of the "Three States," in which are detailed the legends relating to the three brothers *Chang*, who professed the doctrines of the Taou sect, and at the head of an insurrection of rebels, called "Yellow Caps," produced those troubles which ended in the ruin of the Hân dynasty. "Lew-pei took occasion to steal upon Chang-paou with his whole force,

to baffle which the latter mounted his horse, and, with dishevelled hair and waving sword, betook himself to magic arts. The wind arose with loud peals of thunder, and there descended from on high a black cloud, in which appeared innumerable men and horses as if engaged. Lew-pei immediately drew off his troops in confusion, and, giving up the contest, retreated to consult with Choo-tsien. The latter observed, 'Let him have recourse again to magic; I will prepare the blood of swine, sheep, and dogs, and, placing a party on the heights in ambush, wait until the enemy approaches, when his magic will be all dispersed by projecting the same upon him.' Lew-pei assented to this, and directed two of his leaders, each with a thousand men, to ascend the highest part of the mountain, supplied with the blood of swine, sheep, and dogs, and other impure things.

"On the following day, Chang-paou, with flags displayed and drums beating, came to offer battle, and Lew-pei proceeded to meet him; but scarcely had they joined before Chang-paou put his magic in exercise; the wind and thunder arose, and a storm of sand and stones commenced. A dark cloud obscured the sky, and troops of horsemen seemed to descend. Lew-pei upon this made a show of retreating, and Chang-paou followed him; but scarcely had they turned the hill when the ambushed troops started up and launched upon the enemy their impure stores. The air seemed immediately filled with men and horses of paper or straw, which fell to the earth in confusion; while the winds and thunder at once ceased, and the sand and stones no longer flew about. When Chang-paou saw his magic thus baffled, he would have retreated at once, but Lew-pei's two leaders made their appearance on either side, while himself and his lieutenant pursued in the rear. The rebels were defeated with great

slaughter. Lew-pei, on seeing the flag inscribed 'Lord of Earth,' ran full speed on his horse towards Chang-paou, who took to flight, and in his retreat was wounded in the left arm with an arrow discharged at him by his enemy."

In regard to the word *Taou*, Reason, which serves as the denomination of the sect under consideration, and with reference to which they style themselves "doctors of reason," it would seem that the ancient term *philosopher* in use among ourselves had very much the same origin. Some persons have spent much time in discussing the mysterious and recondite meanings which in Chinese metaphysics have been attached to the words *Taou* and *Ly;* but it would be useless to enter upon such a discussion in a work like the present, and we shall content ourselves with the popular meaning of those terms in connexion with each other, which is simply *reason.* One of the missionaries of the Romish church supposed that *Taou* corresponded to the Greek λογος; but it has been objected to this, with some truth, that what several of the Chinese books affirm of *Taou* being the original source and first productive cause of all things, does not so well comport with the definition of the *Logos* given in the philosophical systems which have adopted that term, and where it has been considered not as the *first cause*, but rather the first emanation from the Deity.

Laou-keun had four principal disciples, the chief of whom was *Chuâng-tsze*, concerning whom the Chinese possess an agreeable tale, which has been translated into French by Père Dentrecolles. It may be a relief to the dry dulness of Chinese philosophy, and at the same time illustrative of this sect, if we give an abstract of the story, which is the more particularly deserving of notice, as it has supplied ample materials for the *Zadig* of Voltaire.

The whole, it will easily be perceived, is a satire on the female sex and on marriage, and might perhaps be meant as an indirect dissuasive against that state. The story commences with an enunciation of the principles of the Chinese Epicurus. "Riches, and the advantages which they bring, are but a short and agreeable dream: honours and reputation resemble a brilliant cloud, which soon vanishes. The affection of those united by blood and other ties is commonly but a vain appearance; the most tender friendships may convert themselves into the bitterest strifes. Let us not wear a yoke because it is of gold; nor bear the burden of chains because they consist of jewels. Let us purify our minds, moderate our desires, and detach ourselves from worldly affections: let us, above all things, preserve ourselves in a state of liberty and joy, which is independent of others."

Chuâng-tsze, the story proceeds to say, having married a young and beautiful wife, retired to his native country of *Soong*, the present Shantong, to lead the life of a philosopher. He declined the offer of the sovereign of a neighbouring state, who had been led by the fame of his wisdom to seek his services as minister, with the following apologue:—"A heifer, prepared for sacrifice with high and luxurious feeding, marched in state, arrayed in all the ornaments with which victims are adorned. In the midst of her triumph she perceived some oxen at the plough, and her pride was redoubled. But when, on entering the temple, the victim saw the knife raised in readiness for her immolation, she would gladly have exchanged lots with those whose condition had only just before been despised as inferior to her own."

One day, as Chuâng-tsze was walking, immersed in thought, at the foot of a neighbouring mountain, he on a sudden found himself among a multitude of tombs; and

being struck with the vast number of them, "Alas!" exclaimed he, "here then all are equal; here there is neither rank nor distinction, but the most ignorant and stupid of men is confounded with the sage himself. The sepulchre is at last the eternal abode of all, and, when we have once taken up our place in the habitations of the dead, there is no possibility of return." After spending some time in these gloomy reflections, he proceeded along the tombs, and soon found himself near a newly-constructed sepulchre. The hillock of tempered earth was not yet entirely dry. On one side of the tomb sat a young woman in deep mourning, holding in her hand a large white fan, with which she constantly fanned the surface of the ground. Surprised at this sight, he ven-

The Chinese Widow fanning the Grave.

tured to ask whose tomb this might be, and why the lady took such pains in fanning it? She, however, without rising, continued to wave her fan as before, but muttered some words in a low tone, and at the same time let fall

a few tears—a proof (thought the sage to himself) that shame rather than timidity prevented her from speaking out. When he had pressed her a little farther to explain herself, she made him this reply:—"You see a widow at the tomb of her husband, from whom death has unhappily severed her. He whose bones rest in this sepulchre was very dear to me when alive, and loved me in return with an equal tenderness. Even in dying he could scarcely bear to part with me, and his last words were these: 'My dear spouse, if you should hereafter think of marrying again,* I conjure you to wait at least until the earth of my grave is entirely dry; after which you have my sanction to espouse whom you please.' Now, as it occurred to me that the surface of this ground, which has been newly tempered, would not very soon dry, I thought I would just fan it a little to assist in carrying off the moisture."

The philosopher had much ado to avoid laughing outright at this plain avowal. "The woman," thought he to himself, "is in a monstrous hurry! How could she have the face to boast of the mutual affection between herself and husband? If this be love, I wonder what would have happened if they had hated each other!" Then turning to her he said, "You wish that the surface of this tomb should dry with all speed; but, delicate as you are, this exercise will soon tire you; let me, therefore, give you some assistance." The young woman immediately rose, and, making him a profound reverence, accepted his offer by presenting him with another fan exactly like her own. The philosopher, who had the power of invoking spirits, now called them to his aid. He struck the tomb several times with the fan, and all

* Second marriages (as before stated) are rare on the part of women, and reflect some discredit on the widows.

appearance of moisture presently vanished. The lady upon this gaily thanked her benefactor, and, taking a silver bodkin from her hair, presented it to him with her fan, begging he would accept the same as a small mark of her gratitude. Chuâng-tsze declined the bodkin, but kept the fan, and the lady retired much satisfied with her adventure.

As for the philosopher, he remained altogether in astonishment; then abandoning himself to the reflections that naturally arose out of such an incident, he returned towards his home. Once seated in his chamber, he regarded the fan for some moments in silence, and presently broke out with such sentences as the following: "Would not one suppose, from this, that when two persons marry, it is only from some hate conceived in a former state of existence; and that they seek each other in wedlock solely for purposes of mutual torment?"—His wife had crept behind him without being perceived, but on hearing his words she came forward. "Might one know," she asked, "the cause of your sighing, and where it was you obtained that fan which you hold in your hand?"—Chuâng-tsze immediately related to his spouse the history of the young widow, as well as all that had passed at the tomb where he fell in with her.

Hardly had he finished his recital, when this lady, with a face that beamed with wrath and indignation, loaded the young widow with a thousand maledictions, calling her the opprobrium of the human race, and the shame of her own sex! Then, looking at her husband, "I say it again," exclaimed she, "this woman must be a monster of insensibility." The philosopher, however, went on with the following reflections:—"While her husband is alive, where is the wife that does not flatter and praise him? Is he dead? see her ready to

take her fan and dry up his tomb with all haste. So in a picture you see an animal's exterior, but not the inner parts; you see the face, but not the heart." This put his wife into a great passion. "How can you talk to me in that style?" cried she, "thus to condemn the whole sex in a heap; thus unjustly to confound the virtuous with wretches who are unfit to live! Are you not ashamed to pass such an unjust sentence; and have you no fear of being punished for it hereafter?"

"To what purpose are all these ejaculations?" said the philosopher calmly; "but confess the truth;—were I to die to-day, surviving me as you would in the flower of your age, with so much beauty and such attractions, do you pretend that you would allow three years to slip by without accepting another husband?" *—"Is it not the maxim," rejoined the lady, "that a faithful minister never serves another prince;† that a virtuous widow never thinks of a second husband? Did one ever see a woman of my condition, who, after being once married, transferred herself to another family, and deserted her nuptial bed on her husband's first decease! If, for my misfortune, you were to reduce me to the widowed state, know that I should be incapable of such an act, which would be the disgrace of our whole sex; nay, I should not even dream of marriage for the rest of my life."

"Such promises," observed he, "are easily made, but not often kept!" an observation which turned the ill-humour of his wife upon himself.—"Know," cried she, "that women have often minds more noble and more constant than men of your stamp. What a perfect model

* The longest period of mourning.

† Certain it is that in practice a new Emperor of China often repudiates his father's favourite ministers. Thus Keying was disgraced by the present sovereign.

of fidelity have *you* been! Your first wife dead, you took a second; her you repudiate, and marry myself, who am your third. You judge of others by yourself. As for us women who marry philosophers, we are much less at liberty than any others to form a second marriage. But you are quite well in health; why then torment me with such remarks?" So saying, she snatched the fan out of her husband's hand, and tore it into twenty pieces. "Be quiet," said the philosopher; "your resentment gives me pleasure, and I am delighted to see you take fire upon such a subject." The lady became calm, and they talked of other matters.

In a few days more Chuâng-tsze became dangerously ill, and, to all appearances, at the very last extremity. His wife never quitted the bedside, where she sat bathed in tears, and continually sobbing. "From what I can see," said the philosopher, "I shall hardly recover from this attack. To-night or to-morrow morning we must part for ever. Alas, that you should have torn up the fan I brought you; it would have served so well to dry up the earth at my tomb!"—"Ah," exclaimed his wife, "do not, in your present state, let such distressing suspicions enter your mind; suspicions, too, so injurious to myself! I have studied our books, and I know what our rites demand. My faith having been once sworn to yourself, it shall never be transferred to another; and if you doubt my sincerity, I consent, nay, I demand, to die before you, in order that you may be persuaded of my truth."—"That is enough," replied he; "I feel assured of your constancy: but, alas! I find myself dying, and my eyes are closing for ever upon you." So saying, he became breathless, and lay without a symptom of life.

The despairing widow, with loud cries of distress, now

embraced the body of her deceased husband, and held it long locked within her arms. She then dressed herself in a long mourning habit, and made the neighbourhood resound with the expressions of her grief and desolation. She would indulge neither in food nor sleep, and, in short, seemed to be at her wits' end. The neighbours presently came to do honour to the remains of the deceased, whom they knew to be a sage of the first rank. As soon as the crowd began to withdraw, a youth was perceived, of fair exterior and an elegant habit, who gave himself out to be descended from the sovereigns of that particular state. "It is some years," said he, "since I announced to the philosopher Chuâng-tsze my intention of becoming his disciple. I came hither with that express design, and now find, alas, that he is dead! What a loss have I sustained!"

He now discarded his coloured clothes, and put on a habit of mourning; then prostrating himself before the coffin of the departed, he touched the earth four times with his forehead, and exclaimed with a voice broken by sobs, "Wise and learned sage, your disciple grieves that he can no longer profit by your lessons; but he may at least mark his attachment and respect by remaining here a hundred days to mourn for you." He then renewed his prostrations, and watered the earth with his tears. After this, he desired to see the lady, that he might make her his compliments; but she sent several excuses. The youth, however, represented that, according to the ancient rites, a woman might allow herself to be seen by the former friends of her husband. "I have," added he; "an additional title to this privilege, since I am here as the disciple of the departed sage." At these pressing instances the widow could not do otherwise than allow herself to be persuaded. She therefore issued from

her chamber, and proceeded with slow steps into the hall, to receive her guest's compliments of condolence, which were few, and made in the usual terms.

When, however, the lady had observed the elegant manners, the wit, and the other numerous attractions of this young gentleman, she was altogether charmed, and began to feel all the symptoms of a rising passion, which she durst not yet confess to herself, but which led her nevertheless to hope that the young man would not very soon quit the neighbourhood. He, on the other hand, anticipated her by saying, "Since I have had the misfortune to lose my master, whose memory must be ever dear to me, it is my wish to seek a temporary abode here, wherein to spend the hundred days of mourning; after which I may assist at the funeral ceremonies. At the same time I may take occasion to peruse the works of this illustrious philosopher: they will in some measure supply the want of those lessons of which I have been robbed by his death."—"It will be an honour to our house," replied the lady; "and I can see no objection to it." So saying, she ordered a slight repast to be served up, and at the same time caused to be laid out, on a commodious table, the compositions of the philosopher, to which was added a copy of the celebrated *Taou-tĕ-king*, which had been a present from Laou-keun himself, the master sage. The youth received the whole of these with the politeness natural to him, and the respect due to the deceased.

On one side of the hall, where the coffin was laid out, were two chambers which opened into it: these were destined for the accommodation of the young stranger. The widow came frequently to the hall to weep over the remains of her husband, and, on retiring, never failed to say something civil to the youth, who always presented

himself to pay his respects. In these frequent interviews many a glance escaped them which betrayed the hearts of either party. If the youth himself was half smitten, the young widow was wholly so. It was lucky for her that, the house being in the country, the negligence of the customary funeral rites was not likely to be noticed. To satisfy her curiosity, she sent quietly for the old domestic who had accompanied the young man to her house, and inquired of him if his master was yet married? "Not yet," replied he. "And what sort of person would he wish his wife to be?" inquired the lady. "I have heard him declare," said the other, "that, if he could only find one who resembled yourself, he should be at the height of his desires."—"Very well, then," added the widow, "you may speak to him of me; and if you perceive that he loves me, tell him from myself that I shall be very well satisfied to be his wife."

"It is needless to sound him on that article," said the old man, "since he has frankly confessed to me that such a union would make him perfectly happy. 'But (observed he at the same time) that can hardly take place, as I am a disciple of the defunct, and such a marriage would scandalize the world.'"—"But that is no hindrance at all," exclaimed the lady; "your master was no real disciple of Chuâng-tsze, for he had only *promised* to become one, and that, you know, is quite another thing. Go; and should any other objection equally trivial occur, you can easily remove it, and I shall recompense you handsomely for your services." He promised to obey her. "Stop!" said she, as he was going; "if the young gentleman desire that this marriage take place, you must come and inform me immediately, at whatever hour it may be." On his departure she remained in a state of no ordinary anxiety, and went repeatedly to the hall

of mourning under different pretexts, the real object being to discover what might be going on in that quarter.

On one of these excursions, as she passed by the coffin of her husband in the dark, she heard a slight noise, which made her start aside with fear and surprise. "It cannot surely be the deceased coming to life?" thought she to herself. Having repaired to her apartment for a lamp to investigate the mystery, the lady found her messenger stretched at full length on the table, which served as an altar for incense and offerings before the corpse. He was sleeping off the effects of the wine which he had drunk on his late visit. Another woman would have broken out in indignation at such an act of irreverence to the dead; she however ventured neither to complain nor even to wake the sleeping sot, but retired to her chamber, where she found it impossible to rest.

On the following morning the widow met her messenger walking at his ease, and apparently without thinking of the commission with which he had been charged. Perplexed by this cold silence, she called him, and, when they had retired to her apartment, "How have you succeeded?" inquired the lady. "There is nothing more to be done," replied the other, very drily. "How is that?" said she; "did you not remember what I told you to say?"—"I forgot nothing," he answered; "my master is very anxious for the union, and thinks nothing more of the obstacle that occurred to him before, as the disciple of the deceased. 'But (said the young gentleman) there are still three insurmountable objections, and I should be very unwilling to declare them to the widow herself.'" "Let us hear these objections," interrupted the lady, "and I will tell you what I think of them."—"You shall have them as they were stated by my master," said he. "In the first

place, then, the coffin of the deceased being still laid out in the hall, this melancholy spectacle is of itself sufficient to interfere with the celebration of the nuptials. Secondly, the illustrious Chuâng-tsze having so tenderly loved his wife, and she having evinced for him so strong an affection, founded on his virtues and great capacity, 'I am afraid (said the youth) that the heart of the widow must remain always devoted to her first husband, especially when she perceives my inferior merit. Lastly, I am here unprovided with either money or any other kind of property. Where, then, are the marriage presents, and other requisites, to be obtained?' These, madam, are the obstacles to his wishes."

"If those are all," observed the widow, "I can soon remove them. As to the first article, of what consequence is this melancholy piece of furniture? What does it contain?—an inanimate body, from which there is nothing to fear. I have at the extremity of my grounds an old ruin; some countrymen, whom I employ, shall remove the coffin there out of sight. So much, then, for the first objection. As to the second, my late husband was indeed a fine specimen of what he pretended to be!—Before marrying me, he had already repudiated his second spouse. On the strength of his ill-founded reputation, the king of a neighbouring state wished to make him his chief minister. He, however, conscious of his incapacity, and afraid of showing it, came to hide himself in this solitary spot. Not a month since, he fell in with a young widow, who was trying to dry up, with her fan, the newly-turned earth about her husband's tomb, because she could not marry until this had taken place. The philosopher accosted her, and, taking her fan, did his best to please her by assisting to dry the tomb. He then kept this fan as a remembrance of his new acquaintance, and brought it home with him; but I

took it from him and tore it in pieces. What great benefits, then, have I received from him, or what kindness did he ever show me? As for the last objection, I myself will provide everything requisite for the marriage. There, take these twenty taëls, offer them to your master; they will provide his dress. Make haste and inform him of all that I have told you. If he agrees, I am prepared to conclude the marriage this very day."

The messenger proceeded with the twenty taëls to the youth, who now agreed to the proposals. As soon as the young widow heard it, she was quite overjoyed. She quitted her mourning at once, and began to adorn herself; at the same time that the coffin was transported, by her directions, into the old ruin. The hall was presently made ready for the celebration of the nuptials, and a grand feast prepared, in order that nothing might be wanting to the occasion. Towards night all the lanterns were lit, and the nuptial taper adorned the principal table. When all was prepared, the youth appeared, habited in a dress which set off to the best advantage his features and figure. The lady herself soon joined him, dressed in a silk garment splendidly embroidered. They placed themselves near each other, opposite to the nuptial taper. Thus contrasted, they set off each other's attractions, as pearls and jewels serve to heighten the splendour of a golden tissue, and at the same time derive a brilliancy from it in return. Having made the accustomed* salutations, and wished each other all felicity, they proceeded hand in hand to the interior apartment, where they went through the ceremony of drinking out of the cup of alliance, and then sat down to table.

Towards the conclusion of the repast, what was the

* For all the details of a Chinese marriage, the reader has been before referred to the 'Fortunate Union.'

astonishment of the late widow, and new bride, when the bridegroom all on a sudden fell into the most terrible convulsions! His features became distorted, his brows knit together, and his mouth twisted into frightful shapes. He could no longer hold himself erect, but fell at his full length on the floor. There stretched out, he beat his breast with both hands, calling out aloud that he had a sickness which must destroy him. Enamoured as she was to the last degree with her new spouse, the lady cried out loudly for help, and, without any consideration for herself, fell on the floor and embraced the unfortunate youth, entreating him to tell her what was the matter: he, however, was in too great an agony to make any reply, and, in short, appeared just ready to expire.

The old domestic, running in at the alarm, took his master up and shook him. "Has this ever befallen him before?" inquired the afflicted lady. "The distemper has seized him several times," replied the other;—"there seldom passes a year without such an attack; and but one remedy can save him!"—"Tell me quickly," she cried, "what it is."—"Our physician," continued he, "discovered the secret, which is infallible: let him take the brain of a man newly killed, and drink it in warm wine; the convulsions will immediately cease, and he will be as well as ever. The first time that this illness attacked him, the prince, his father, ordered a condemned prisoner to be put to death on purpose; but, alas! where shall we find such a remedy at present?"—"Would the brain of a man who died naturally have the same effect?" inquired the lady. "Our physician," replied the other, "told us that in case of absolute need it might be used, provided that the person had not been too long dead."

"Oh," cried the lady, "my last husband has been dead only a few days; open his coffin, then, and take the

remedy from thence."—"I had thought of that," said the man, "but was afraid to propose it, lest it should offend you."—"A great matter truly!" exclaimed she. "Is not the present sufferer now my husband? and ought I not to expend my own blood in his service? Why hesitate, then, to use the dead for the sake of the living?" With that she left her new spouse in the servant's care, and, taking in one hand a hatchet used for cutting wood, while with the other she carried a lamp, away went the fair one to the old ruin where the coffin of her late husband had been last deposited. Arrived there, she tucked up her long sleeves, seized the hatchet with both hands, and, lifting it above her head, struck with all her force upon the lid of the coffin, which split immediately in two. A woman's strength would not have served to break the lid of an ordinary coffin; but the philosopher, being aware that people sometimes return to life after seeming to be dead, had purposely directed that the planks of his coffin should be made very slight. A few more blows drove off the lid, and our lady, being out of breath with her exertions, stood still a moment to recover herself. At that instant she heard a deep sigh, and, casting her eyes on the coffin, she saw her former husband move himself and sit up!

One may imagine her dismay at this apparition; she uttered a loud scream, her legs tottered under her, and the axe fell unnoticed from her hands.—"My dear wife," said the philosopher calmly, "lend me your hand to get out of this." Once upon his legs, he took the lamp from her and walked towards the hall. The lady followed him, but with faltering steps, and sweating big drops; for she felt that her new husband must be the first object that met the eyes of her old one! When they reached the apartment, everything looked gay and splendid, but the

youth and his attendant seemed luckily to have vanished. This gave her a little courage, and she now began to contrive some way of escaping from her embarrassment; so, casting a tender look at the philosopher, "Ah!" cried she, "my thoughts have been occupied day and night with your dear memory; at length, having heard a distinct sound issue from the coffin, and recollecting the stories that they tell of dead persons returning to life, I flattered myself that you might be of the number. So I ran as fast as I could, and knocked off the lid. Thank Heaven, my hopes did not deceive me! What happiness to recover my dear husband, whose loss I should for ever have bewailed!"

"I am much obliged by your kind attention," said the philosopher; "but have still one little question to ask you. How is it you are not in mourning; what is the reason that you are dressed out in this fine brocade?" The answer was ready. "I went," she replied, "to open the coffin, with a secret foreboding of my happiness: the joy of the occasion called for anything but a mourning dress, and it was inconsistent to receive you alive in a habit that relates only to the dead: I therefore put on my wedding clothes."—"Well, well," said he, "we will let that pass: but why was my coffin stowed away in the old ruin, instead of this hall, which was its proper place?". This question posed the lady, and she had nothing to say. Chuâng-tsze, then casting his eyes on the dishes and bowls and other signs of rejoicing, considered them attentively without saying a word: he next called for some warm wine, and swallowed several cups in silence, while his wife stood by in the greatest confusion. "Look behind you!" at length said the philosopher; and on turning round she perceived her intended, with his follower, ready to enter the hall. This was a new subject of terror to her; but on looking

round again they had vanished.* In a word, this unhappy woman, finding all her intrigues discovered, and unable to survive her shame, retired to her chamber, and there, untying her silken girdle, hung herself by it to one of the beams. She soon became dead in earnest, without the chance of returning to plague her husband; who, finding her in that condition, cut her down very quietly, and, mending up his old coffin, laid her in it. Then striking up a mock dirge on the cups and bowls intended for the feast, he broke them all in pieces with great shouts of laughter, and ended by setting fire to the mansion, and burning his wife's body in the ruins, from which nothing was saved except the sacred book called *Taou-tĕ-king*.

After that, the philosopher set out on his travels, quite resolved never to take another wife. In his wanderings he fell in again with his master Laou-tsze, to whom he attached himself for ever after, and became the first of his disciples.

It remains for us to describe a variety of superstitious customs and observances which are practised by the Chinese, either with or without a particular relation to some *one* of the three sects, or persuasions, which have been already noticed. In common with a considerable portion of the rest of mankind, they are pretty generally fatalists, or believers in inevitable destiny; and the practical mischiefs of such a creed cannot be more strongly displayed than in the consequences resulting from their apathetic carelessness in regard to the use of *fire*. Notwithstanding the repeated conflagrations which every year devastate the town of Canton and other cities, the same unaccountable negligence is perpetually apparent to the

* The whole had been an illusion, practised by the adept in philosophy and magic.

most casual observer, who, in perambulating their streets, or taking notice of their domestic habits, cannot fail to be struck by the extreme carelessness with which burning paper and lighted sticks of incense are left about their combustible dwellings, or pipes smoked, and bunches of crackers discharged, in temporary edifices constructed entirely of *matting*. It has been already mentioned that, in the year 1822, the whole of the European factories were laid in ashes by a fire which originated in a small shop, and which, before it had run its course, destroyed a very considerable portion of the city. Some of these fires are doubtless the work of incendiaries, who hope to profit in the confusion; but a large number must also be considered as the results of that stupid belief in fatalism which tends to paralyze effort and to banish caution. Hence the thriving trade that is carried on by fortune-tellers and calculators of destiny.

That the wiser and better portion of the Chinese, however, are occasionally above the influence of this grovelling sentiment, seems proved by the existence of a treatise in their language, wherein it is shown that a man may "lay the foundation of his own destiny; or, in other words, that *conduct is fate*. The author relates that, being left by the death of his father without a guide at a very early age, he consulted an old man with a long beard, who professed the art of divination. This person told him that in such a year he should attain a scholar's degree at the public examination within his district, and that, in some other year, he should succeed at the higher trial in the provincial capital. It so happened that these events occurred as they had been predicted, and his faith became accordingly confirmed in the skill of the soothsayer, who next informed him, after predicting the various vicissitudes of his remaining life, that he would die at the age of fifty-

three, on a particular day, and at a particular hour of the morning. Being confirmed in the belief that his whole course of existence was thus fixed by an immutable decree of fate, he became henceforward quite indifferent to active effort and exertion of every kind. It chanced that he fell in, some time after, with a sage of a very different description, who took him to task for his apathy. "Can a man, then," inquired our disciple, "escape the allotments of destiny?" To which the other replied, "Fate is of our own making, and happiness the result of our own conduct. The whole field of happiness is contained within the circumference of the heart, which, when once effectually moved, ensures success. *Seeking* rests with ourselves, and has a great influence upon *attainment.*" Persuaded by this admonition, the reformed believer in destiny first prayed to Fŏ (for he was a Budhist) that he might be successful in his pursuits, and then vowed to perform three thousand acts of merit that he might deserve success. The sage drew out for him a register of conduct, in one column of which his good deeds were to be inserted, and in the other his errors; the first to be carried to his credit, and the last to be scored out as the former increased.

In the following year an examination was held at Peking of those who had attained the highest degrees in the provinces, and, though the conjurer had predicted that our scholar should rank as only *third* among the successful candidates, it so happened that he was *first* on the list, and thus his faith in fortune-telling was completely overturned. When the three thousand acts of merit which he had formerly vowed were, after the lapse of some years, nearly completed, the thought of praying for a son (an essential ingredient in Chinese prosperity) next arose in his mind. He again vowed the performance of three thousand good deeds; and after some time a son was born to him. On

this occasion, however, the registration of acts of merit seemed to be a joint-stock concern, for whatever he did himself he recorded in writing; but his wife, who could not write cut off the end of a goose-quill, and, dipping it in vermilion, impressed a red point, for every good action she performed, in the register. The story says that there would sometimes be many of these in a day.

By perseverance in a similar course of virtue, our scholar at length attained to the rank and office of governor of a district. He now commenced a new blank register, and vowed to perform no less than ten thousand acts of merit. Somewhat dismayed at the extent of the undertaking, he one night applied for advice and instruction to some spiritual being which presented itself in a vision. The answer was, "Curtail the exactions on the people. This one act will be equal to the performance of the ten thousand." The land-tax of the district was then something more than one-fifth of a taël of silver per *mow*.* A reduction was effected of nearly one-half. The magistrate told his vision to the sage who had put him upon his present course of life. "Doubtless," said the old man, "to perform one single act like this, with perfect integrity of motive, may be equal to the performance of ten thousand minor acts; for by lessening the taxes of a whole district ten thousand people may be benefited."—In a word, our Chinese had employed his ten talents to the best advantage. The fortune-teller had calculated that he would die in his fifty-third year; but he was already arrived at sixty-eight years of age, and was moreover quite well. Thus it was that the three great items of Chinese happiness, namely, "male progeny, official employment, and long life," were

* About the eighth of an English acre, from which it would seem that rather more than ten shillings per acre is considered as a high tax.

all enjoyed *in spite of fate.* The story seems to have been written for the express purpose of counteracting the general belief in the decrees of immutable destiny, and lessening the credit of astrologers.

The general proneness of the Chinese to superstitious practices (most of which pertain to the Taou sect) could not be more completely proved than by an account of the charms, talismans, and felicitous appendages hung up in houses, or worn about the person, specimens of which were sent home to the Royal Asiatic Society by Mr. J. Morrison, a son of the late Doctor.* It will be sufficient if we describe a few of these. Among the principal are "money-swords," as they are called, consisting of a number of ancient copper coins, each with a square hole in the middle, fastened together over a piece of iron shaped like a sword with a cross hilt. These are suspended at the heads of sleeping-couches and beds, that the supposed guardianship of the sovereigns in whose reigns the coin was issued may keep away ghosts and evil spirits. They are chiefly used in houses or rooms where persons have committed suicide, or suffered a violent death; and sick people sometimes resort to them in the hope of hastening their recovery. Their efficacy is no doubt fully equal to that of a horseshoe nailed over a door, or any of those infallible devices formerly adopted in England against witches and ghosts. The Chinese have commonly a firm belief in, and consequently a great dread of, the wandering spirits of persons who have come to an unfortunate end, and which they denominate *kuei.* When Europeans first arrived in the country, their red or yellow hair, and high noses, were strongly opposed to the prevailing standard of Chinese comeliness. Mothers and nurses pointed them out as ogres and devils to their chil-

* Royal Asiatic Transactions, vol. iii. p. 285.

dren, and hence the present term for any Europeans, *fân-kuei*, "foreign ghost, spirit, or devil," with some allusion, perhaps, to their *wandering so far from their homes.*

In illustration of the Chinese belief in ghosts, and what may be styled "demoniacal possession," may be adduced an occurrence which took place at Canton in 1817. The wife of an officer of government had occasioned the death of two female domestic slaves, from some jealous suspicions, it was supposed, of her husband's conduct towards the girls; and in order to screen herself from the consequences, she suspended the bodies by the neck, with a view to its being construed into an act of suicide. As the parents of the girls appealed to the magistrate for satisfaction, bribes were offered, and with success, to stop the progress of inquiry; but the conscience of the woman tormented her to such a degree that she became insane, and at times personated the victims of her cruelty, or, as the Chinese supposed, the spirits of the murdered girls possessed her, and employed her mouth to declare her own guilt. In her ravings, she tore her clothes and beat her own person with all the fury of madness; after which she would recover her senses for a time, when it was supposed that the demons quitted her; but only to return with greater fury, which took place a short time previous to her death.

In her last fit she became worse than ever, and was confined to a room with an old woman-servant. But the avenging demons (according to the Chinese), being incensed at this attempt to conceal guilt, possessed the old woman also, who, either from terror or sympathy, had become affected like her mistress. The latter died, and the affrighted husband endeavoured to quiet the distracted nurse, by telling her she should be maintained in

one of the Budhist nunneries, where she would become at length absorbed into the divine nature of Fŏ. She consented to this, on condition that he would worship her, which he forthwith pretended to do. The demon (say the Chinese), speaking by the old woman's mouth, further insisted that the two daughters, who had assisted the mother in maltreating the girls, should also come and worship, which was accordingly done; and on the arrival of the woman at the place of her retirement the souls of the murdered females, having been appeased by the foregoing occurrences, left her in possession of her perfect senses. It may be reasonably supposed that a train of circumstances like the preceding, in themselves sufficiently explicable on natural grounds, were magnified by ignorance and superstition into something preternatural.*

A common Chinese talisman † is the "hundred families' lock," to procure which a father goes round among his friends, and, having obtained from a hundred different parties a few of the copper coins of the country, he himself adds the balance, to purchase an ornament or appendage fashioned like a lock, which he hangs on his child's neck, for the purpose of *locking* him figuratively to *life*, and making the hundred persons concerned in his attaining old age. Another charm worn by children is a figure of the *Ky-lin*, a fabulous animal supposed to have appeared at the birth of Confucius, and therefore ominous of promotion and good fortune to the young. On the 5th day of the 5th moon, sprigs and cuttings of the *Acorus calamus*, and a plant called by the Chinese *gae*, are placed at the doors of houses to prevent all manner of evil from entering. The "peach charm" consists of a

* Chinese Gleaner, p. 144.
† Royal Asiatic Transactions, *ut supra*.

sprig of that tree covered with blossoms, which, at the new year, is placed at doorways for the same purpose as the foregoing. The *pa-kua*, or eight mystical diagrams of Fo-hy, cut in stone or metal, are often worn as charms; and the bottle-gourd, a curious species of the genus *cucurbitus* closely resembling a bottle, is represented in ornaments as an emblem of longevity. We have before stated that the dried gourd itself, hung round the waists of children living in boats, frequently saves their lives by floating them until picked up after they have tumbled overboard.

One might be led to conclude that the Chinese were generally a very happy people, could this only be inferred from the value which they set on long life. The thing may be partly explained, however, by the great reverence with which age is always treated, and by the fact that old persons commonly enjoy an unusually great share of comparative ease and exemption from toil, by the services which both opinion and law impose on their juniors. The greatest favour and distinction that the emperor can bestow on one of his ministers is the word *show*, "long life," written in a peculiar manner with his own hand, and supposed, no doubt, to be one of the best promoters of longevity. Persons of the lowest class, who have attained to an unusual age, have not unfrequently been distinguished by the emperor; and Kien-loong, when himself a very old man, gave a solemn feast to all his subjects, of *every rank*, who had passed the usual term of human life! No doubt this solid foundation of their social and political system, on the patriarchal basis, has contributed to its steady duration.

The written spells which the Chinese sometimes use consist of mystical compounds of various characters, or words, in which astrology is generally introduced, with

the eight diagrams of Fo-hy, the twenty-eight lunar mansions, the *five* planets, &c. Some of these spells are kept about the person, others are pasted on the walls of rooms. "Occasionally," observes Mr. Morrison, "they are used as cures for sick persons, by being either written on leaves which are then infused in some liquid, or inscribed on paper, burned, and the ashes thrown into drink, which the patient has to swallow." This is not much worse, however, than the *aurum potabile* of the old materia medica among ourselves. For some reason or other, bats (which the Chinese call *fei-shoo*, "flying mice") are looked upon as good omens, and constantly depicted as an emblem of felicity on various objects of use or ornament. Even in this, perhaps, there is as much reason as in the Roman notion of learning the secret of fate from the pecking of chickens, or in that zoological list of ill omens which Horace, either in jest or earnest, imprecates against the wicked :—

> "Impios parræ recinentis omen
> Ducat, et prægnans canis, aut ab agro
> Rava decurrens lupa Lanuvino,
> Fetaque vulpes;" &c.

The Chinese look upon rooks as unlucky birds, whose visits prognosticate visits still more unpleasant from the *mandarins*. There is, however, a species of white-necked crow for which they have a high veneration, as was proved in the last embassy. A gentleman of the party had carried a gun with him, in one of those long walks which we were accustomed to take at the frequent points of sojourn. The unusual appearance of this crow, with a white cravat, led to its being for once considered as fair game, and the bird was shot. The occurrence was reported to the emperor's legate, who conducted the embassy, and from him an earnest request was conveyed to the ambassador that

no more such birds might be killed. "But it was only a crow," was the natural answer. "Only a crow!" exclaimed the legate. "Of all the birds that fly it should have been spared, for it is a sacred animal." He then related a story respecting crows having once performed some essential public service, just as geese are said to have saved the Roman Capitol. This shows at least the utility of being acquainted with the most trivial superstitions of a country.

But the strangest and most unaccountable of the Chinese superstitions is what they denominate *Foong-shuey*, "wind and water," a species of geomancy, or a belief in the good or ill luck attached to particular local situations or aspects, which we had occasion to notice before, and which, among the more rational classes of the people, is admitted to be nonsensical. Before a house is built or a burial-place selected, it is necessary to consult certain professors of the occult science, who, at the price of adequate fees, proceed with much solemnity to examine the situation. After frequently perambulating and examining the ground, and even deferring their decision for months, they will fix on some particular place. The lucky position of a grave is supposed to exercise some influence on the fortunes of a whole family; and if, after all the expense and trouble of consulting the cheats who profess the art, ill fortune rather than good should attend the parties, this is of course attributed to anything except the inefficiency of the *foong-shuey*. This term may in general be construed by the word *luck*, and it has been supposed that in a country like China, where nearly all long journeys are performed by water, "good wind and water," or, in other words, good luck on a journey, has by degrees come to signify good luck in every circumstance and condition of life.

It would seem scarcely possible that such fooleries as those above stated should meet with countenance or support in persons calling themselves Europeans; yet in 1821 a Portuguese of some local consideration in Macao contributed to the erection of a pagoda for improving the fortunes of the place! The following notice was exhibited, but it does not appear that the whole of the proposed scheme was ever accomplished. "The Chinese and foreign merchants have hitherto been prosperous, their wealth abounding, and the destinies of the place altogether felicitous. Of late, however, its fortunes have waxed lean, and the influence of the atmosphere been unlucky, so that the acquisition of riches has become less certain. A proposal is accordingly made to erect a pagoda and a pavilion, in order to renovate and improve the commercial fortunes of the island. The plan has fortunately met with the concurrence of the Portuguese magistrate, who has offered one hundred dollars to assist in its execution. Leang-ta-tseuen, whose skill is universally acknowledged, and everywhere attended by incontestable proofs, has visited Macao, in order to fix on a proper spot. He declares that a lofty pavilion should be erected on the sea-side, near the new village to the right of the temple of Ma-tsoo, and a high pagoda on the eastern arm of Monkey Island. He affirms that prosperity and riches will be the result—that both Chinese and strangers at Macao will share in the felicity. He has written a paper on the subject, and drawn out the plan, which has obtained the assent of the Portuguese magistrate; the permission of the *Keun-min-foo* (the Chinese magistrate of Macao) has also been graciously given. It is therefore resolved," &c.

The Chinese have a mode of divination by certain pieces of wood, in shape the longitudinal sections of a

flattish oval. These are thrown by pairs, and, according to the mode in which they turn up, a judgment is formed of any future event by consulting the interpretation afforded by a Sibylline volume which is hung up in the temple. If the throw, however, happens to be unlucky, they do not mind trying their chance *over again* until the answer is satisfactory. A plan of divination, of somewhat the same kind, is decribed by Tacitus in his account of the ancient Germans: "Sortium consuetudo simplex; virgam frugiferæ arbori decisam in surculos amputant, eosque notis quibusdam discretos super candidam vestem temere ac fortuito spargunt."*

* Germ. x.

CHAPTER XVII.

LANGUAGE AND LITERATURE.

Chinese characters symbols of ideas — Roots or radical characters — Written and spoken languages — Written characters — Rules for study — Literary habits — Ethics — Aphorisms — Histories — Account of Europe — Biographies — Civil code — European translations.

THE written language of China realizes to a great extent the theory of a universal medium for the communication of ideas, as conceived by Bishop Wilkins, and methodized by him into an elaborate treatise which he presented to the Royal Society. While the letters of our alphabet are mere symbols of *sounds*, the Chinese characters, or words, are symbols of *ideas*, and alike intelligible to the natives of Cochin-China, Japan, Loo-choo, and Corea, with those of China itself. The best practical illustration of a written character, common to several nations who cannot understand each other's speech, are the Arabic numerals common to all Europe. An Englishman, who could not understand what an Italian meant if he said *venti-due*, would comprehend him immediately if he wrote down 22. This advantage, which belongs to our *numerals* only, pertains to the *whole language* of the Chinese, and those other nations who use the same characters, without affixing to them the same pronunciation.

No connexion or resemblance whatever is to be traced between the written language of China and the Egyptian

hieroglyphics. The former, indeed, is a much more artificial and ingenious system than the last, which had not advanced beyond the rude representations of visible objects; while the Chinese, although it seems to have *originated* in something of the same kind, is now anything but a collection of mere pictures. They have no less than six different forms of writing or printing, just as we have the black letter, the roman, the italic, the written, and the running-hand forms. Indeed the Chinese running-hand might very easily be taken for an alphabetic character, though it differs from most of these systems in being written in *perpendicular columns*, like the Manchow Tartar language.

The rumoured difficulties attendant on the acquisition of Chinese, from the great number and variety of the characters, are the mere exaggerations of ignorance, and so far mischievous as they are calculated to deter many from the pursuit whose business takes them to the country, and would no doubt be greatly promoted by some practical acquaintance with its language.* The roots, or original characters of the Chinese (or what, by a species of analogy, may be called its *alphabet*), are only 214 in number, and might indeed be reduced to a much smaller amount by a little dissection and analysis. To assert that there are so many thousand characters in the language is very much the same thing as to say that there are so many thousand words in Johnson's Dictionary; nor is a knowledge of the *whole* at all more necessary for every practical purpose than it is to get all Johnson's Dictionary by heart in order to read and con-

* Since the Treaty of 1842 a marked encouragement has been given by the Foreign Office to young men willing to qualify themselves as translators and interpreters at our consulates. Some of these have attained to a great proficiency in the language.

verse in English. Prémare very correctly observes,—"neminem esse qui non possit libros legere et Sinice componere, quando semel quatuor vel quinque millia litterarum (aut verborum) bene novit"—"that there is nobody who might not read and write Chinese after he had once acquired a good knowledge of 4000 or 5000 characters or words." A much smaller number might, in fact, suffice; and it is worthy of remark that the entire number of *different* words, apart from repetitions, in the Penal Code translated by Sir George Staunton, was under 2000.

The roots which we have mentioned serve, like our alphabet, for the arrangement of the words in the large Chinese Dictionary, compiled more than a hundred years since by order of the Emperor Kâng-hy; and so ingenious and lucid is the arrangement, that to a practised person there is little more difficulty in turning to a word than among ourselves in consulting Johnson. The main portion of Dr. Morrison's Chinese Dictionary is arranged on the same principle. *One* part, however, is on a different plan, which requires that the searcher after a word should know its *pronunciation* before he can find it. This (which is an attempt to imitate the European method) is by far less certain than the proper Chinese mode, which requires no knowledge whatever of the *sound* of a word, but only of its *composition:* and this is obvious to any person who knows the roots. These roots answer the purpose of our alphabet in lexicographic arrangement, and may be considered, besides, as the foundation of the *meaning* of each word to which they serve as root.

From the principle on which the written language has been constructed, there has ensued to it a remarkable property, which did not escape the penetration of the late Professor Rémusat, in his paper on "the state of the natural sciences among the people of Eastern Asia." As

the 214 roots or radical characters (whose combinations with each other form the whole language) singly represent or express the principal objects or ideas that men have occasion to communicate in the infancy of their knowledge, they comprise within their number the heads of *genera* and *classes* in nature and thus afford the elements and means of a philosophical system of arrangement. As their knowledge increased, "a fortunate instinct," as M. Rémusat calls it, guided the framers of the language, and led them, instead of forming characters altogether new, to express new objects by the ingenious combination of those elementary symbols which they already possessed. Thus, for instance, among the roots we find *horse*, *dog*, *metal*, &c.; and the *addition* of some *other* significant symbol, expressive of some peculiar property or characteristic, serves to designate the different species comprised under these principal genera. In this manner, as M. Rémusat observes, each natural object becomes provided with a binary denomination, inasmuch as the complex character is necessarily formed of two parts; one for the class, order, or genus, the other for the species or variety. Thus they express *horse*, *horse-ass*, *horse-mule*; *dog*, *dog-wolf*, *dog-fox*; *metal*, *metal-iron*, *metal-copper*, *metal-silver*; the *elementary* or *generic* words, horse, dog, metal, being those under which the compounds are arranged in the dictionary.

Thousands of terms have been thus compounded, and thousands more may be constructed in the same way; for the process by which they are created, and which is strictly analogous to the principle of the Linnæan nomenclature, is one which cannot be exhausted by repetition; and from this simple sketch it may be conceived how much aid the understanding and memory may gain by the employment of signs of this rational nature, in a subject of

such immense compass, in which order and method constitute the first pledge of the progress of studies and the advancement of knowledge. M. Rémusat goes on to show that the Chinese have not derived the advantage which they might to their science from this happy constitution of their language; and that their naturalists have not made the progress which they should have done in the course traced out for them by the lexicographers. For it must be remembered that this systematic arrangement was a mere classification of written signs, brought together by the dictionary-makers, and distributed by them according to the component and elementary parts, with a view solely to facilitating the search for them. Persons who could avail themselves of signs so judiciously contrived and arranged, and including within themselves a principle of order and the elements of analysis, might have been expected to perfect in their scientific labours what the mere etymology of the characters suggested to them: but without denying the decided superiority of the Chinese, in this respect, to the other people of Asia, they must be confessed to have made but an imperfect use of their opportunities and means. The whole essay of M. Rémusat on this curious subject is deserving of perusal.

The highly artificial and philosophic structure of so singular a language entitles it to the attention of intelligent persons, as a part of the history of the human mind. But it has now other powerful claims to notice from being the medium through which at least *four hundred millions* of mankind, occupying countries which exceed the united extent of all Europe, communicate their ideas. With the growth of our commerce, and of our Protestant missions, the value and importance of its acquisition may no doubt increase in estimation. By only knowing how to write a few hundred Chinese words, a man can make himself

understood over an extent of 2000 miles of latitude, from Japan in the north to Cochin-China in the south. As a portion of general literature alone, and without one half of the practical importance which attaches to it among ourselves, the French have long since thought it worthy of the endowment of a professor's chair: and that nothing of the kind should as yet have existed in England is remarkable.*

The uniformity in the *written* character has not prevented the existence of very considerable diversities in the *oral* languages of the different provinces of China, and especially the province of Fokien. These diversities are analogous to the different pronunciation given to the same numerals in the various countries of Europe. To adduce the example with which we set out, the number 22, which an Italian calls *venti-due*, a Frenchman pronounces *vingt-deux;* and, in like manner, the Chinese numerals expressive of the same amount are read *urh-she-urh* by the native of Peking, while the Canton man calls them *ee-shap-ee*, although both *write* them exactly alike. It is in this way that the universality of the Chinese language extends only to the written character, and that the natives of the two extremities of the empire, who read the same books, and understand each other perfectly on *paper*, are all but mutually unintelligible in *speech*.

There is, however, one mode of pronouncing the written language, that of Peking, or of the court, which is universally adopted in official translations, and in the intercourse of the higher orders all over the empire. This has been termed by Europeans the Mandarin dialect, and is called in Chinese *Kuân-hua*, which has the same

* Since the above was written, a Chinese professorship has been instituted at the London University, and one at King's College.

meaning; and this of course is the proper dialect for strangers to learn, as being of most extensive use. The total number of different syllables does not much exceed four hundred, but these are varied by intonations sufficiently distinct to the ear of a native, so as to treble or quadruple that amount. The danger of misunderstanding in *speech* (for there can be none in *writing*) is obviated by joining two words together to express any particular object, thus making in fact a word of two syllables. For instance, in the oral language, *foo* means "father," but it also means "an axe," and the possibility of the equivoque is prevented by saying, in the first instance, *foo-tsin* (father-relation), and, in the second, *foo-tow* (axe-head), which circumstance tends to render the written language much more brief and concise than the spoken, as it has no need of such expletives.

The Chinese attach much consideration to the graphic beauty of their written character, and make use of inscriptions for ornamental purposes, as may be often seen on the specimens of porcelain brought to this country. The advantage of simplicity (and a very great advantage it is) constitutes the merit of our alphabetic writing; but that of variety and picturesque effect may fairly be claimed by the Chinese.* The importance of caligraphy as an accomplishment is naturally esteemed more highly among them than it is in Europe; and large ornamental inscriptions, or labels, are frequently exchanged as remembrances among friends, or used as pictures are among us, for purposes of taste and decoration. The two most usual forms of their character are, first, that in

* "The almost infinite variety of forms which the Chinese symbolical character is capable of receiving is certainly favourable to the beauty, and, it may almost be said, picturesque effect, of such inscriptions."—*Staunton.*

which books are commonly printed,* and which, being stiff and inelegant, lays claim only to clearness and accuracy; secondly, that in which all papers of consequence are written, and which combines correctness with elegance. The last is at once the most useful and the most studied form of the Chinese character. To attain skill in writing it is more or less the aim of every educated Chinese; and to impart that skill is the object of a work whose rules have been translated by the author of these pages, and its examples given in a series of lithographic plates in the Royal Asiatic Transactions.†

Nothing can exceed the neatness and beauty of Chinese notes and letters, which are generally written on ornamental paper of various colours, called by them "flowered leaves." They sign with a cipher, which every man adopts for himself, being a few characters combined in a complicated manner into *one*. Another mode of attestation is by affixing the stamp of a seal, not in wax, but in red ink. It would be an error to suppose that the language, however calculated from its structure for durability, has *not* changed to a certain degree in the course of time. Some characters or words have become obsolete; others have been gradually adopted; and, above all, the whole is much more copious than in ancient times. In their earlier works (as in the sacred Classics noticed in our twelfth chapter) there is a much greater economy of words than in more modern literature. A portion of the difficulty or obscurity of ancient authors arises from the same word being used, for example, in different senses, or as a different part of speech,—a defect which time, and the multiplication of the symbols of

* Analogous to our roman type.

† Vol. i. p. 304.

ideas, have tended to supply. A great increase especially has taken place in those *particles* of speech which become the more necessary in a language in proportion as there is less inflexion, and which therefore abound more in the modern tongues of Europe than in the ancient sources whence they are derived. In Chinese there is no inflexion whatever, and therefore these particles become the more indispensable; indeed, native writers call them by the express term of *tsoo-yu*, "assistants of speech."

As we cannot go far into this subject in a work of the present description, it may suffice to observe, generally, that the grammar of the language is extremely limited. In the absence of all inflexion, the relation of words to each other in a sentence can only be marked by their *position*. The verb, for instance, must always precede its object, and follow its agent. The plural number is denoted by the affix of *mun* to nouns,—*jin-mun*, men, *t'ha-mun*, they; or by repeating the noun, as *jin jin*, men. Either of these is rendered unnecessary when a specific number is prefixed, as *san jin*, three men. The genitive or possessive case is generally denoted by the affix *che* succeeding the noun like our *'s*, as T'hien *che* gen, "Heaven's favour." The comparison of adjectives is marked by affixes, as *haou*, "good," *keng haou*, "*more* good," *ting haou*, "*most* good." The structure of Chinese phrases is often discoverable in the broken English of Canton, which is a *Chinese idiom in English words*. The tenses of verbs are denoted by auxiliaries or expletives, as *t'ha lae*, "he comes," *t'ha yaou lae*, "he shall come." The cases of nouns and pronouns are determined by prepositions, as *yu ne*, "to thee," which sometimes become postpositions, as *ty-hea*, "the earth below"—under the earth. They have a species of numeral

adjuncts which they join on to nouns, for the sake of perspicuity in speech, as *yĕ pun shoo*, "a *volume* book;" *san kuân peih*, "three *reed* pencils," &c. The collocation of words must upon the whole be considered as of more importance in this than in those other languages where the relations of different words to each other are marked by the infallible distinctions of number, gender, case, and person, as shown by *inflexion*. The Chinese themselves divide their words into three great classes: first, "live words," or verbs—denoting action or passion; secondly, "dead words" or nouns, substantive and adjective—the names and qualities of things; thirdly, "auxiliaries of speech," or particles that assist expression.

By far the best introduction to the language of China is the *Notitia Linguæ Sinicæ* of Prémare, composed in the last century, but printed only a few years since at the Malacca college, at the expense of Lord Kingsborough. Professor Neümann, of Munich, has fully shown that Rémusat's French grammar was greatly indebted to this work. Where there is so little of what can strictly be called grammatical rules, the proper way to teach is by *examples* rather than precepts; and this is what Prémare has done, illustrating the subject by quotations from the best works in the native character. It is a pity, however, in the present disuse of the learned languages, that the work had not been printed in English rather than in Latin, with a view to general utility. It consists of two parts, with an introduction giving a general account of Chinese books, and the method of studying them, and a treatise on the character and its pronunciation. The first part is on the ordinary language of conversation and popular books. The second treats of the more abstruse and condensed style of scholastic composition and of the ancient books; which forms, however, the basis of the

popular language. With the aid of Prémare's work, and Dr. Morrison's Dictionary, it is in the power of any one to learn Chinese as far as *books only* are concerned.* To be able to converse in it he must go to China.

Dr. Morrison has given a curious account, from original sources, of the rules which govern native scholars in the prosecution of their studies. The first thing needful is "to form a resolution," and this resolution is valuable in proportion as it is firm and persevering. It is received as a maxim, that "the object on which a determined esolution rests *must* succeed." The student is directed to keep by him a commonplace-book, and daily to record in it what he reads; then at intervals of ten or twenty days to recapitulate and con over what he has before learned; "thus the lover of learning daily acquires new ideas, and does not lose those he already possesses." The scholar who does not rouse all his energies is told to consider how he is to get through his task when locked up with nothing but pencils, ink, and paper, at the public examination. "Should a theme be there given him which he cannot manage, let him reflect what his distress will be."

When a man is reading a particular section of a work, he is directed, in this treatise *on the conduct of the understanding*, to give up his whole mind to that alone, and on no account to let it be diverted for the time by any other subject. "A caldron of water, for example, after fire has been long applied to it, will at last boil; but if, in the mean while, you change the water and put on fresh, though a great deal of water will be partially heated, none will be made boiling hot. I have seen (says the

* The first half of the present century has afforded all the effectual aids to the acquisition of the language; and the dictionaries, grammars, dialogues, and translations are now abundant.

Chinese writer) those men who covet much, and devote themselves to universal knowledge. When they read, they presume on the quickness of their genius, and section after section passes before their eyes,—but when do they ever really apply their minds to the subject? Better a little and fine, than much and coarse. The ancient military rule makes the power of an army to consist in its perfect training, and not in its mere numbers. I deem the same to be true in reference to reading."

In study, a main point is to get rid of extraneous thoughts, and matters foreign to the object before one. The illustration of this subject of feeding the intellect is taken from the feeding of the body. "If a man's stomach (they say) is filled with coarse and ordinary food, he can swallow nothing more, though the most precious dainties be placed before him. In reading, the same is true of the mixed and vulgar thoughts of every-day life, which occupy and fill up the mind." Another important point is the ready *application* of acquired knowledge. A certain class of men, though they have read a great many books, are incapable of transferring and using the stores they have laid up. "There is one convenient rule (it is added) for a man who has many worldly affairs to attend to: it is to make a good selection of a volume of ancient literature, and another of modern composition, and to place them on his table. When a little leisure is gained, let him study them. If, instead of adopting this plan, he wait until he may be entirely at leisure for months, the expected period is likely never to arrive. Time flies like an arrow; in the twinkling of an eye a month, and again a month, is gone, and behold the year is at an end! This loss and detriment arise entirely from putting off to the future."

Studies ought to commence (it is observed) during the fifth watch (before five in the morning), for these early hours are many times more advantageous than the subsequent forenoon and later portions of the day. The *attention* should be as intensely exerted as that of a general at the head of his army, or a criminal judge in a court. On no account should there be breaks of five and ten days in one's studies. "Do not fear being slow; only fear standing still—fear one day's ardent heat, followed by ten of cold." In prosecuting a journey on the road, he who walks fast and stops frequently does not get on so well as he who walks constantly and at a slower pace. Study, however, though it should not be intermitted or delayed, ought not to be followed with too great eagerness and precipitancy; for, admitting that a man can, if he tries, walk a hundred *ly* a day, yet, if he walk only seventy or eighty, he will feel himself strong and equal to this exertion daily; whereas, by working himself up to overstrained effort, he will make himself ill, and thus more time will be lost than learning gained.

When approaching the time of public examination, a student should particularly shun an eagerness to read much, for, if not before done, it is then too late. Let the duly-prepared scholar select twenty or thirty sections of the best composition, and con it over till he relish its beauties and feel its spirit; he will surely derive strength from this at the period of trial. The treatise goes on to comment on the folly of collecting books instead of reading them. "There are many men (it is observed) who store up at home 10,000 volumes, and never read ten works out of them; they merely buy the books and place them in cases as playthings to look at. They have newly-bound books, which no hand has opened, nor eye has looked over. Such people are much below the poor

starved scholar, who takes a few copper coins and buys a book which he carries home, but never puts out of his hand until it is entirely his own."* These are the precepts by which the native Chinese student is urged on in a course which the ancient policy of his government has laid open to all ranks, and made the sole pathway to political employment, distinction, and power.

"One of the most remarkable national peculiarities of the Chinese," observes Sir George Staunton, "is their extraordinary addiction to letters, the general prevalence of literary habits among the middling and higher orders, and the very honourable pre-eminence which from the most remote period has been universally conceded to that class which is exclusively devoted to literary pursuits. * * * * Since the memorable era of Confucius the Chinese empire has been repeatedly dismembered, and again restored to its integrity; its sceptre has passed through the hands of many families or dynasties; it has been a prey to many intestine divisions and revolutions, and it has been twice subdued by a foreign foe; but the reverence of the government and people for the name and institutions of Confucius has survived every change.* * * * Even now, under the sway of that comparatively illiterate and warlike race which conquered the empire in the middle of the seventeenth century, and still holds it in subjection, several individuals, recognised as the actual heirs and representatives of the sage, are decorated with honorary distinctions, and maintained in a state of respectable independence at the public charge. Schools and colleges for the instruction of the people in his doctrines continue to flourish in every part of the empire; a competent acquaintance with his writings continues to be an indispensable qualification for civil office.

* Morrison's Dictionary, vol. i. p. 753.

"Under the influence of such institutions, it is by no means surprising that the proportion of the community exclusively devoted to letters should be much greater in China than it is in any other country on the surface of the globe. It is so great as to constitute of itself a distinct class in the state. It is the first and most honourable of the four classes into which the body of the people is considered as divisible according to the Chinese political system; namely, the literary, the agricultural, the manufacturing, and the mèrcantile. * * * * The advantages arising from so extensive a diffusion of a familiar acquaintance with what may be called their Confucian or classical literature will more fully appear when the nature of that moral system is considered which it is the uniform tendency of its pages to inculcate. Du Halde informs us that 'Toute la doctrine de ce philosophe tendoit à redonner à la nature humaine ce premier lustre, et cette première beauté qu'elle avoit reçue du ciel, et qui avoit été obscurcie par les ténèbres de l'ignorance, et par la contagion des vices. Il conseilloit, pour pouvoir y parvenir, d'obéir au Seigneur du ciel, de l'honorer et de le craindre, d'aimer son prochain comme soi-même, de vaincre ses penchants, de ne prendre jamais ses passions pour règle de sa conduite, de les soumettre à la raison, de l'écouter en toutes choses, de ne rien faire, de ne rien dire, de ne rien penser même, qui lui fût contraire.'

"In the same spirit is the statement or summary of the Chinese moral system which the Emperor of China in 1713 directs to be given by his ambassadors to the Russian government. 'If you are asked what we principally esteem and reverence in China, you may thus reply: In our empire fidelity, filial piety, charity, justice, and sincerity are esteemed above all things. We revere and abide by them: they are the principles upon which

we administer the empire as well as govern ourselves. We likewise make sacrifices and oblations; we pray for good things, and we deprecate evil things; but if we did not act honestly, if we were not faithful, pious, charitable, just, and sincere, of what avail would be our prayers and sacrifices?' The universal veneration of the Chinese for the memory of Confucius is of itself no small homage to the excellence of his doctrines. It is strikingly manifested by the special dedication of temples to his honour in all the chief cities of the empire. * * * * In the lateral galleries of their temples a number of smaller tablets are generally displayed, on which are carefully recorded the names and virtues of such of the deceased inhabitants of the district as were deemed to deserve, either on account of their private worth or their public services, this posthumous distinction. * * * * Everything that is observient to, or connected with, literary objects in China is carried to a degree of refinement, and blended with all their ordinary concerns of pleasure and of business, in a way that may seem extravagant and puerile;* but such an attachment to the forms and instruments by which knowledge is conveyed could hardly exist altogether independently of a regard for their object." †

In a general classification of the literature of the country, those sacred or canonical works which have already been briefly described in the twelfth chapter must of course be placed at the head of the list. The term *king*, which means a sacred book, has been usurped by the Budhists and sectaries of Taou in application to their own religious works, but in strictness can apply only to the writings of Confucius and his school. Next to these in

* Their customary reverence for letters is such, that they will not tread upon written or printed paper.

† Miscellaneous Notices, part ii. p. 6.

rank are those moral and political essays which have the sanction of the government and of the learned. The *Shing-yu*, or sacred edict, a work to which we have had occasion to refer, stands high in the list of moral and didactic books, consisting of essays written by the Emperor Yoong-ching, or theses furnished by his father and predecessor, Kâng-hy. A very respectable translation of this work was published by Dr. Milne many years back, and we may here give his own account of the book. "It treats of moral duties and of political economy. Like all similar Chinese productions, it *begins* with filial piety, and thence branches out into various other relative duties, according to their supposed importance. Indeed, on whatever subject a Chinese writer treats, he can at all times with the utmost facility draw arguments for its support from the relation between parent and child.* Even the grossest absurdities of their idolatry are thus supported. The work we are now considering is in general, for the matter of it, well worth a perusal. Though Christians can derive no improvement to their ethics from it, yet it will confirm them more and more in the belief of two important points, viz. that God has not left himself without a witness in the minds of the heathen; and that the bare light of nature, as it is called, even when aided by all the light of pagan philosophy, is totally incapable of leading men to the knowledge and worship of the true God. Yet, for my own part as an individual, I am of opinion that, as all truth and all good come originally from the same source, so we ought to look with a degree of reverence on those fragments of just sentiment

* It may be observed that the duties of this relation are supported occasionally by arguments and illustrations drawn very unexpectedly from nature. "Look," say they, "at the lamb and the kid, which *kneel* when they are suckled by the mother."

and good principle which we sometimes meet with among the heathen."*

There is more common sense, as well as more Christianity in this, than in that narrow-minded and culpable spirit of detraction which can see nothing good except at home, and has sometimes pervaded the writings of those who undertook to enlighten the Chinese.

Like the Hebrews, the Chinese number the words of their most valued books: and one object of this has been to divide the aggregate into daily or monthly portions for the learner. The work above noticed is called *Wan-yen-yu*, the "scripture of 10,000 words," and said actually to contain that number. It is appointed to be read publicly at new and full moon to the people and soldiery of each province, though in spring and autumn it is frequently omitted, on account of the labours of agriculture. Early on the first and fifteenth day of every moon, the civil and military officers meet full dressed in a spacious public hall. The superintendent, or master of the ceremonies, calls aloud, "Stand forth in order;" which they do, according to their rank. He then says, "Kneel thrice, and bow the head nine times." They kneel and prostrate themselves with their faces towards a raised eminence, on which is a tablet with the emperor's name. He next calls aloud, "Rise and retire;" upon which they proceed to the place where the law is usually read, and where the military and people are assembled, standing round in silence. The reciter or orator, advancing towards an altar of incense, kneels, and, reverently taking the board on which the thesis appointed for the day is written, ascends a stage with it. Silence being then commanded by a species of wooden rattle, or *sistrum*, the text is read aloud, after which the orator explains the

* Chinese Gleaner, vol. ii. p. 29.

sense. The same forms are observed in expounding the laws generally; for the Chinese have a maxim, that "to make the laws universally known is the best way to prevent their violation."

Among their other moral and didactic works, they have collections of detached sentences and aphorisms, of which they are extremely fond, and for the expression of which their language is singularly well adapted. Pairs of these sentences, displaying a parallelism of construction, as well as meaning, and written in a fine character on ornamental labels, are a frequent decoration of their dwellings and temples. There is a work in a single volume, called *Ming-sin paou-kien*, 'A precious Mirror to throw Light on the Mind,' being in fact a dictionary of quotations, filled with such extracts from various works, and therefore very useful to a learner. The favourite sayings and proverbs of all nations are among the best sources of information respecting their real character and condition; and with this view the reader is presented below with a collection, which has been made without any regard to arrangement or order:—

"1. A wise man adapts himself to circumstances, as water shapes itself to the vessel that contains it.

2. Misfortunes issue out where diseases enter in—at the mouth.

3. The error of one moment becomes the sorrow of a whole life.

4. Diseases may be cured, but not destiny.

5. A vacant mind is open to all suggestions, as the hollow mountain returns all sounds.

6. When the tree is felled, its shadows disappear. (Desertion of the great by their parasites.)

7. He who pursues the stag, regards not hares.

8. To be afraid of leaving a track, and yet walk upon snow.
9. If the roots be left, the grass will grow again. (Reason given for exterminating a traitor's family.)
10. Relaxation above produces remissness below. (In authority.)
11. The gem cannot be polished without friction, nor man perfected without trials.
12. What is told in the ear, is often heard a hundred miles off.
13. Ivory is not obtained from rats' teeth. (Said in contempt.)
14. A wise man forgets old grudges.
15. Riches come better after poverty, than poverty after riches.
16. A bird can roost but on one branch; a mouse can drink no more than its fill from a river. (Enough is as good as a feast.)
17. When the pool is dry, the fish will be seen. (When accounts are settled, the balance of profits will appear.)
18. You cannot strip two skins off one cow. (There is a limit to extortion.)
19. Who swallows quick can chew but little. (Applied to learning.)
20. What cannot be told had better not be done.
21. The torment of envy is like a grain of sand in the eye.
22. He who wishes to rise in the world should veil his ambition with the forms of humility.
23. Extreme delight produces its contrast.
24. The gods cannot help a man who loses opportunities.*

* Pour être grand homme, il faut savoir profiter de toute sa fortune."—*La Rochefoucauld.*

25. Dig a well before you are thirsty. (Be prepared against contingencies.)

26. Sweet words are poison; bitter words, physic. (Flattery and reproof.)

27. The full stomach cannot comprehend the evil of hunger.

28. To eat stolen food without wiping the lips. (The practices of a rogue without his art.)

29. Carelessness gives temptation to dishonesty.

30. Eggs are close things, but the chicks come out at last. (Murder will out.)

31. To swim with one foot on the ground. (A safe and prudent character.)

32. When *Yen-wâng* (the King of Hell) has decreed a man to die at the third watch, no power will detain him till the fifth.

33. Better be a dog in peace than a man in anarchy.

34. Letters and husbandry—the two principal professions.

35. To add feet to a snake. (Superfluity in a discourse when the subject is exhausted.)

36. A diligent pen supplies memory and thought.

37. Who aims at excellence will be above mediocrity; who aims at mediocrity will fall short of it.

38. Pouring water on a duck's back. (Fruitless counsel or advice.)

39. To win a cat, and lose a cow. (Consequences of litigation.)

40. To stop the hand is the way to stop the mouth. (If a man will not work, neither shall he eat.)

41. *No medicine* is the safe medium in physic. (Between that which cures, and that which kills.)

42. Old age and faded flowers, no remedies can revive.

43. I will not try my porcelain bowl against his earthen dish. (Said in contempt.)

44. He who toils with pain will eat with pleasure.

45. No duns outside, and no doctors within. (Absence of sickness and debt.)

46. *Forbearance* is a domestic jewel.

47. An oil-jar can be used again for nothing but oil. (A man must follow what he was bred to—*Semel imbuta, &c.*)

48. Kindness is more binding than a loan.*

49. Borrowed money makes time short; working for others makes it long.†

50. The friendship of mandarins impoverishes; that of merchants makes rich.

51. All that a fish drinks goes out at the gills. (Spent as soon as got.)

52. If families have no sons devoted to letters, whence are the governors of the people to come? (Necessity for general education.)

53. Those who cannot sometimes be unheeding (or deaf) are not fit to rule.

54. Right should be preferred to kindred. (In patronage.)

55. A wife can be answerable for no crime; the responsibility rests with the husband.

56. The bees have their kings and ministers; and ants their social relations.‡

57. Parents' affection is best shown by teaching their children industry and self-denial.

58. Something is learned every time a book is opened.

59. The more talents are exercised, the more they will be developed.

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* "Lending loseth both itself and friend."—*Shaksp.*

† "Long as to him who works for debt, the day."—*Pope.*

‡ "The ants' republic, and the realm of bees."—*Pope.*

60. Unless the laws be executed even on the imperial kindred, they will not be obeyed.

61. Early preferment makes a lazy genius.

62. The best thing in governing is example; the next, impartial rigour.

63. Great wealth comes by destiny; moderate wealth by industry.

64. The ways of superiors are generally carried by inferiors to excess.

65. A rash man is fond of provoking trouble, but, when the trouble comes, he is no match for it; a clever man turns great troubles into little ones, and little ones into none at all.

66. Large fowls will not eat small grain. (Great mandarins are not content with little bribes.)

67. A truly great man never puts away the simplicity of the child.

68. To obtain *one* leads to wishing for *two*. (*Enough* is always something more than a man possesses.)

69. Lookers-on may be better judges of the game than the players.

70. The best thing is to be respected, and the next to be loved; it is bad to be hated, but worse still to be despised.

71. A fat hen makes fat chickens. (A rich master has sleek servants.)

72. The poor cannot contend with the rich, nor the rich with the powerful.

73. The man in boots does not know the man in shoes. (Boots are the official and full dress.)

74. Good fortune is a benefit to the wise, but a curse to the foolish.

75. While at their ease, men burn no incense; but when trouble comes, they clasp the feet of Fŏ.

76. A man's words are like an arrow, straight to the mark; a woman's are like a broken fan.

77. Domestic failings should not be published abroad.

78. A good action goes not beyond the doors; a bad one is carried a hundred leagues.

79. Virtue is sought for in a wife; beauty in a handmaid.

80. A foolish husband fears his wife; a prudent wife obeys her husband.

81. If the upper beam be crooked, the lower will be awry. (Effect of example in superiors.)

82. Obsequiousness makes friends; candour breeds dislike.

83. One lash to a good horse; one word to a wise man.

84. He who does not soar high will suffer the less by a fall.

85. The grass endures but one season; man lasts but one generation.

86. The drunkard's fault is not the wine's, but his own. (Drunkenness cannot be pleaded in extenuation.)

87. The man who combats himself will be happier than he who contends with others.

88. Sleepiness in an old man, and wakefulness in a young one, are bad symptoms. (Medical axiom.)

89. The fish dwell in the depths of the waters, and the eagles in the sides of heaven; the one, though high, may be reached with the arrow, and the other, though deep, with the hook; but the heart of a man, at a foot distance, cannot be known.*

90. It is equally criminal in the emperor and the subject to violate the laws.

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* Dr. Milne remarked the similitude to Proverbs xxv. 3. "The heaven for height, and the earth for depth, and the heart of kings is unsearchable."

91. Let every man sweep the snow from before his own doors, and not busy himself about the frost on his neighbour's tiles.*

92. In a field of melons, do not pull up your shoe; under a plum-tree do not adjust your cap. (Be careful of your conduct under circumstances of suspicion.)

93. A man need only correct himself with the same rigour that he displays to others; and excuse others with the same indulgence that he shows to himself.

94. Though the life of man be short of a hundred years, he gives himself as much pain and anxiety as if he were to live a thousand.

95. By nature all men are alike; but by education widely different.

96. To contrive is man's part; to accomplish is Heaven's. (L'homme propose, et Dieu dispose.)

97. Old age is like a candle in the wind. (Easily blown out.)

98. High trees feel the wind; lofty station is obnoxious to danger."

Some of the ordinary expressions of the Chinese are pointed and sarcastic enough. A blustering harmless fellow they call "a paper tiger." When a man values himself over much, they compare him to "a rat falling into a scale, and weighing itself." Overdoing a thing, they call "a hunchback making a bow." A spendthrift they compare to "a rocket," which goes off at once. Those who expend their charity on remote objects, but neglect their family, are said to "hang a lantern on a pole," which is seen afar, but gives no light below.

But to return to their regular literature, of which his-

* This was quoted by the authorities at Shanghae, when told of the hostilities at Canton in 1856.

tories may be said to occupy the *second* class, after their sacred, moral, and didactic works. There is a continuous history of China from the earliest ages down to the conclusion of the *Yuen*, or Mongol Tartar dynasty, called the 'Twenty-one Historians,' consisting of nearly three hundred of those *brochures*, or thin volumes stitched with silk, about ten of which are generally contained in a folding case. We shall treat of printing under the head of ARTS hereafter, but may observe incidentally in this place, that the early invention of this art, in the tenth century, just five hundred years before it was known in Europe, was a circumstance that tended to multiply and preserve the Chinese annals, and to afford abundant materials to the writers of later times. Yet we should search in vain in their histories for anything beyond a barren chronicle of facts and dates. Trains of reasoning and lessons of political philosophy can scarcely be looked for in a country the theory of whose government has always been despotic, however tempered by other circumstances. "Instead of allowing (observes Mr. Gutzlaff very correctly) that common mortals had any part in the affairs of the world, they speak only of the emperors who then reigned. They represent them as the sources from which the whole order of things emanated, and all others as mere puppets who moved at the pleasure of the autocrat. This is truly Chinese; the whole nation is represented by the emperor, and absorbed in him."

The same writer quotes a native authority in support of that scepticism regarding the earlier or mythological periods of Chinese history which was expressed in the fifth chapter. "Who (inquires Yang-tsze) knows the affairs of remote antiquity, since no authentic records have come down to us? He who examines the stories will find it difficult to believe them, and careful scrutiny will convince

him that they are without foundation.* In the primeval ages no historical records were kept. Why then, since the ancient books that described those times were burnt by the first emperor of the *Tsin* dynasty (about 200 B.C.), should we misrepresent those remote ages, and satisfy ourselves with vague fables?" The inconsistencies contained in the early relations destroy the credit of the whole, and prove them to have been, in a great measure, like the mythology of other countries, the inventions or improvements of after-times.

Perhaps there is no portion of Chinese literature so little interesting to us as its *barren annals*, in which the principal events recorded are the successions of long lists of sovereigns, and the mere domestic chronicles of a country which has always had less connexion with the rest of the world than any other empire of the same extent. There is some reason, therefore, for the opinion already quoted of Prémare, who placed Chinese historians at the bottom of their list of writers, "not because they write worse than others, but because he did not much care to know the events which they relate." In our own opinion, the only readable Chinese chronicle is the *San-kuŏ-chy*, or 'History of the Three States,' comprising that period of its annals when the monotony of universal dominion was broken by the contests of several independent chiefs for the sovereignty. This work, however, is rather to be viewed in the light of an historical romance than as a mere matter of record, though the speeches which are put into the mouths of its heroes and actors are quite as likely to be genuine as those which we meet with in the ancient writers of Europe.

The interest of Chinese history, to a foreigner, is most engaging when the country is involved in contests with

* Like the early Roman history of Livy.

the Tartars, or subjected by their invasions. "The struggle (observes Mr. Gutzlaff) against the Tartar hordes on the north and west became very violent during the Tâng and Soong dynasties, and ended in the submission of the whole of China to the Mongols about A.D. 1280. This period is highly interesting. Chinese writers have dwelt much upon the reigns of the emperors (of their own nation) who held the throne during these times of commotion, and we find in their works abundant materials for a history of the period. But for composing a history of the Mongol dynasty we ought to have recourse to foreign helps, as the Chinese writers say comparatively little respecting it. They consider the family which then reigned as usurpers, sprung from the barbarians who first laid waste the celestial empire, and then trampled 'the flowery nation' under foot. Kublai, however, has his biographers and historians among the Chinese, but none of them equal Marco Polo, the Venetian traveller, in the interest of their narratives. To make ourselves acquainted with the *Ming* dynasty (the native race, which expelled the Mongols), the Chinese can afford us one work of more than sixty volumes."

They cannot yet publish their observations upon the present dynasty, which a second time expelled the native sovereigns, and established the dominion of the Manchow Tartars. A manuscript work, called *Tong-hua-lŏ*, containing the reigns of the first three emperors, is written in the same style as the annals of the empire under the preceding dynasties; but not being committed to the press, on account of the risk in which it might involve those concerned, the copies are of course scarce and expensive. As a specimen of the style in which Chinese works sometimes notice foreign countries, the following passage from the above history may be adduced:—"Eu-

ropean navigators calculate their distances by degrees,* as the Chinese do by watches. The Europeans coming to China sail first eighty degrees in a southerly course, until they reach the Cape of Storms, and thence steer in a northerly direction, until they arrive at the limits of the province of Quang-tong. This is a voyage of six months or more, during which they see no land.

"There is also a mode of communicating from Europe with China by land; but as the kingdom of Russia intervenes, and is difficult of access, the route by sea is always preferred. Russia is about 12,000 *ly* distant from Peking. It is bounded on the other sides by Europe and Turkey. . . . . The climate to the north is so very cold, that, although it is understood that those parts were formerly inhabited, travellers meet with no traces of natives at present, and they are supposed to have perished. The woods are very extensive, and the snow lies many fathoms deep. They have old accounts of mountains of ice in the northern seas, some thousand cubits high, which, though they have been disbelieved, may perhaps be entitled to credit." †

One of the most singular records of the Chinese, and a rare exception to the anti-social spirit generally prevailing in their foreign policy, is that account of the embassy from Kâng-hy (the second emperor of the reigning dynasty, and perhaps the most enlightened monarch that ever ruled the country) to the Khan of the Tourgouth Tartars, then situated between the Caspian Sea and the borders of Russia Proper. The work has been translated by Sir George Staunton, and the best summary of it may be given in his own words:—"The ambassador commences

* The divisions of the globe, according to our method, were taught the Chinese by the Jesuits, and have been adopted by them.

† Staunton's Miscellaneous Notices, vol. i. p. 60.

his narrative with the relation of some particulars immediately concerning himself; he then gives at length the instructions he had received from his sovereign, and afterwards proceeds, in the form of a journal, to detail the observations that occurred upon his route, his intercourse and conversations with the several public authorities among the Russians and Tourgouths with whom he communicated, more especially with Prince Gagarin, the then governor-general of Siberia, and with Ayuke, the Tourgouth Khan, or sovereign; and he concludes with a recapitulation of the whole in the form of an official report, to his sovereign, of his proceedings.

"The mission, the particulars of which are thus recorded, was undoubtedly a singular and remarkable event in Chinese history. The appointment of a deputation, consisting of several official persons with a suitable train, to proceed upon a laborious and in some degree hazardous expedition to the distance of some thousand miles, and through the territories of a powerful neighbour, with whom they had had but little previous intercourse, and that not always of the most amicable nature, certainly seems to bespeak the existence of a spirit of enterprise, and more enlarged and enlightened views in the government of China at that period than we should probably have looked for at any time in that of an Asiatic nation.

"But in whatever respect the policy which suggested the mission may be considered to have been unusual and out of ordinary course in China, the narrative at least is perfectly Chinese, both in its style and sentiments: the national spirit and character pervades it throughout, and will be obvious to every reader. It is possibly true that precisely such a mission would not have been sent under any other circumstances, or at any other period of the Chinese history; but there is nothing either in the conduct

of the mission, or in the narrative of it, which any Chinese or Tartar officer of ordinary attainments at the present day might not equally have done or written; and the whole transaction seems to have obtained the unequivocal sanction and approbation of the government, the narrative having been published early in the next reign, under the emperor's special authority, and a copy of it deposited in the imperial library at Peking, as appears from its title being duly registered in the Chinese printed and published catalogues of that collection.*

"In addition to the circumstances which thus authenticate the work, and give it a certain degree of authority, as an exemplification of the maxims of Chinese policy, we have the advantage also of being able to put the author's fidelity to the test, by comparing his statements and notices on passing objects with those of Mr. Bell (of Antermony) in his account of a nearly contemporary expedition by a similar route; and it is certainly satisfactory to remark that there is a very general coincidence. . . . The descriptions of the scenery, inhabitants, and remarkable objects which were seen in the course of the route, it must be confessed, are very meagre and unsatisfactory; but they derive some incidental interest from the novelty of the quarter from whence they proceed; besides which, the form of narration which the writer has adopted has led him to describe the manners, customs, and notions of his own countrymen, as frequently as those of the people whom he visits,—a peculiarity which may, perhaps, add little to the value of his work to Chinese readers, but which cannot be unacceptable to us, to whom China is naturally an object of greater curiosity and interest than Tartary or Siberia."

* The fact that there is a printed and published catalogue of the Emperor of China's library, within the reach of any purchaser, is more than might have been expected.

Of the history of individuals, or *biography*, which the Chinese themselves call *Sing-heo*, "the study of surnames," they possess a great variety, and at the head of these, as the oldest in date and estimation, may be instanced the *Lun-yu*, or Discourses of Confucius, a work which, we have already observed, is in plan not unlike our own Boswell. There is a modern biographical work called *Sing-poo*, in no less than *one hundred and twenty* volumes, comprising the lives of eminent men and women, but withal a dull compilation, and deficient in interest and animation. The art of printing has put the Chinese in possession of as voluminous and cheap a literature as any people in the world; though the difference in the standards of intellect and taste renders much of this but little calculated to please European taste or satisfy European intellect. It is for this reason that very few Chinese works can bear to be translated in detail, and that the best way of making their general literature known is by short summaries or abstracts.

Whatever their ignorance may be of matters extraneous to their empire, the numerous and extensive *statistical* works which they possess demonstrate that the Chinese have a very detailed and accurate knowledge of their own country. The principal of these, Ta-tsing Ye-tung-chy, 'A complete Account of the Ta-tsing Empire,' consists of two hundred and forty volumes, giving particulars of the population, the geography, revenues, magistracy, and other details of every province of China Proper, as well as an account of Chinese Tartary. Every province, too, has its own separate history in print, comprising particulars of its productions, manufactures, eminent persons, and everything that can interest those connected with it; so that the ignorance of the Chinese cannot be truly stated with reference to their own vast empire, exceeding as it

does (with Tartary) all Europe in extent. Indeed the publicity unreservedly given to political and state matters of every description is a singular feature of their system. The Peking Gazette has very correctly been described as a state engine of no inconsiderable importance, exhibiting obvious proofs of an anxiety to influence and conciliate public opinion upon all public questions, in a manner which could not be predicated of a government theoretically despotic.

Some account of their great work on criminal law has already been given in the sixth chapter. The civil code of the present Tartar dynasty is called Ta-tsing Hoeytien, and consists of no less than two hundred and sixty-one volumes, of which it may be worth while to abstract some particulars, from the appendix to one of the annual reports (1829) of the Anglo-Chinese college. It contains not only the existing laws, but an account of all the changes and modifications of the law by successive emperors since the conquest in 1644, and frequently the *reasons* assigned at the time for the enactment of new or repealing of old laws. The whole is preceded by prints explanatory of all state ceremonies, both civil and religious. Then follow maps of every principal district in the empire, including not only China Proper, but Eastern and Western Tartary.

The body of the work is divided into nine parts, of which the first contains all regulations concerning the imperial house now reigning, with the privileges of the descendants of the Tartar conqueror, in the direct and collateral lines. The second part relates to the palace and its regulations. The next six parts are concerning the Six Tribunals or Boards, among which the whole details of the government are distributed in systematic order, as before noticed. Under the ninth and last division are

miscellaneous laws relating to public education, the examination of candidates for public honours and offices, peculiar laws concerning the Tartar dependencies, with the courts which take cognizance of their affairs.

In that part which relates to the first of the Six executive boards (that of civil offices) is a detailed list of all the appointments in the empire, the relative rank of each officer, and the rules for selecting, appointing, removing, rewarding, and punishing. In the management of official people, the principle of a comparison of merits and demerits is kept in view, and the one are set off against the other. A graduated record of both is preserved, and an officer is accordingly promoted or degraded so many steps. Some approach to this system has lately been made in our own Indian empire, where it appears that a regular report is sent to the government of even the private conduct and demeanour of every civil *mandarin*, by his immediate superior. In China there is a terrible round of espionage in perpetual operation, and *mutual jealousy* is substituted for the principle of *honour*. This may be very necessary and proper as relates to the Chinese, but we can hardly suppose it called for in our Indian empire, near as that may be to China. At Peking, members of the imperial house are all required to attend the public boards, and listen to what is going on. In case of observing anything amiss, they are permitted to give information to the emperor. When our last ambassador was in the neighbourhood of Peking, such persons were looking on continually as spies, and one of the conductors of the embassy, by way of caution to the strangers, told them that the emperor had very *long ears;* an asinine attribute which no one had the presumption to contest.

Under the head of Science we shall soon have more particularly to consider that portion of Chinese learning

which relates to astronomy, geography, and medicine. The two former departments have been infinitely indebted to the Romish missionaries, and to the patronage which those scientific and learned persons received from Kâng-hy, the most liberal and enlightened of Chinese monarchs, who condescended even to take lessons in mathematics from the Jesuits.

In the department of medicine (surgery they do not attempt) we shall see that the Chinese works contain their whole knowledge of natural history, with their peculiar theory of the circulation, and the materia medica of the animal, vegetable, and mineral kingdoms, as contained in that voluminous work the Pun-tsaou. Considering the little intercourse that the Chinese have had with other countries, it is perhaps quite as surprising that they should know so much, as that they should know no more; for everything they possess, with the exception of the two departments of astronomy and geography, may fairly be considered as *their own.*

Reserving the lighter literature of China (its *belles lettres*), as poetry, drama, and romance, for a separate chapter, we may observe that specimens of more serious works have, in the course of rather more than a century, been but scantily presented, in various European translations, to the knowledge of the Western world. It was as early as 1711 that Père Noel's Latin version of the *Four Books*, with two other subordinate classics, was printed; at a long interval after that date appeared Gaubil's translation of the *Shoo-king;* and in 1785 was published Mailla's voluminous work in fourteen quartos, entitled 'Histoire générale de la Chine,' being a version of the native annals called *Tongkien-kang-mo.* Fresh translations of several portions of the 'Four Books' have since been made; among the rest, Mencius by M. Stanislas Julien; while a com-

plete English version of the whole issued from the Anglo-Chinese press in 1828. A French translation of the ancient ritual and ceremonial code of China is said to be in preparation by M. Julien.

Of some of the missionary translations, especially those of our own country, it may be observed that, if there is much that is obscure or worthless in the original works, this has been rendered still worse by the wretched attempt to render word for word, thus exhibiting the whole in a jargon which has not inaptly been distinguished as "missionary English." This of course must be anything but a *faithful* picture of the originals, which, with all their defects in point of matter, are well known to be, in respect to manner and style, the models of the language in which they were composed. It is to this foolish and injudicious system of translation that we must attribute the following harsh judgment on that particular department of Chinese letters, which appeared some years ago in a critical work: "The specimens which have reached us through the medium of the missionaries are not the best adapted to convey information respecting the present state of the Chinese. Their labours are sufficiently voluminous, but their choice of subjects is not always the most happy. We may find an apology for the Chinese in endeavouring to make sense of their ancient records; but we cannot conceive what interest a few insulated Europeans can possibly take in toiling to unravel the inextricable confusion of their *king*, or canonical books." The fact is, that the confusion of the originals has occasionally, by means of uncouth translation, been made "confusion worse confounded."

CHAPTER XVIII.

LITERATURE—(*continued.*)

Belles Lettres — The drama — Passion for theatrical exhibitions — Absence of scenic deception — Neglect of the unities — Stage costume — Character of plays — Comparison with Greek drama — 'The Heir in Old Age' — Analysis of a tragedy — Poetry — Structure of verse — Character of poetry — Ancient ode — Poem on London — Romances and novels — 'The Fortunate Union.'

"THE Chinese stand eminently distinguished," says a writer very correctly in the 'Quarterly Review,'* "from other Asiatic nations, by their early possession and extensive use of the art of *printing*—of printing, too, in that particular shape, the stereotype, which is best calculated, by multiplying the copies and cheapening the price, to promote the circulation of every species of their literature. Hence they are, as might be expected, a reading people; a certain quantity of education is universal among even the lower classes—and, among the higher, it is superfluous to insist on the great estimation in which letters must be held under a system where learning forms the very threshold of the gate that conducts to fame, honours, and civil employment. Amidst the vast mass of printed books, which is the natural offspring of such a state of things, we make no scruple to avow that the circle of their *Belles Lettres*, comprised under the three heads of Drama, Poetry, and Romances or Novels, has always possessed the highest place in our esteem; and we must say that there appears

* Vol. xli. p. 85.

no readier or more agreeable mode of becoming intimately acquainted with a people from whom Europe can have so little to learn on the score of either moral or physical science, than by drawing largely on the inexhaustible stores of their ornamental literature." We may therefore proceed to consider Chinese *belles lettres*, in the threefold division of Drama, Poetry, and prose Fiction.

In a moderate collection of Chinese books belonging to the East India Company, there are no less than two hundred volumes of plays, and a single work in forty volumes contains just one hundred theatrical pieces. The government of the country, though it does not (like that of imperial Rome) provide spectacles for the people at its own cost, gives sufficient countenance and encouragement to such amusements, by permitting them to be erected in every street by subscriptions among the inhabitants. On some particular days the mandarins themselves supply the funds. The principal public occasions of these performances are certain annual festivals of a *religious* nature, when temporary theatres, constructed with surprising facility of bamboos and mats, are erected in front of their temples, or in open spaces through their towns, the spectacle being continued for several days together. The players, in general, come literally under our legal definition of *vagabonds*, as they consist of strolling bands of ten or a dozen, whose merit and rank in their profession, and consequently their pay, differ widely according to circumstances. The best are those who come from Nanking, and who sometimes receive very considerable sums for performing at the entertainments given by rich persons to their friends.*

* The female parts are never performed by women, but generally by boys. "No women ever appeared on the Greek and the Roman theatres; but the characters in the dramas of the latter, as (occasionally) in those

To prove the rage of the Chinese for their theatrical exhibitions, we insert an account of the expenses annually incurred at Macao—which is partly a Portuguese town, and contains few rich Chinese—on account of play-acting.* In front of the large temple, near the barrier-wall that confines the Portuguese, twenty-two plays are performed, the acting of which alone amounts, without including the expenses of erecting the theatre, to 2200 Spanish dollars. At the Chinese temple, near the entrance of the inner harbour, there are annual performances, for which 2000 dollars are paid; and various lesser exhibitions through the year make up the total expenditure under this head to upwards of 6000 dollars, or 1500*l.*, among a small population of mere shopkeepers and artisans. A circumstance, however, occurred at Macao in 1833, which must have impressed the Chinese with a notion that Europeans were fully as much devoted to such amusements as themselves. A party of Italian opera-singers from Naples, consisting of two women and five men, after having exercised their vocation with success in South America, proceeded on their way across the Pacific westward towards Calcutta, as to a likely and profitable field. Circumstances having occasioned their touching at Macao, they met there with inducements to remain some six months, until the season should admit of their prosecuting the voyage; and a temporary theatre having been contrived, they performed most of Rossini's operas with great success. The Chinese were surprised to find what, in the jargon of Canton, is called a *Sing-song*, erected by the foreigners on the

of China, were sometimes played by eunuchs. The soft and delicate female characters of Shakspere had not the advantage of being played by a female during his life; Mrs. Betterton, about 1660, being the first, or nearly the first female, who played Juliet and Ophelia."—*Brief View of the Chinese Drama*, p. 14.

* Chinese Gleaner, 1821, p. 60.

shores of the celestial empire, and in that very shape, too, which most nearly resembles their own performances, a mixture of song and recitative. As the nearest way home from Calcutta, for these Italians, was by the Cape of Good Hope, they were a singular instance of the Opera performing a voyage round the world.

Before touching on the subject of their dramatic compositions, we will say a word regarding the mere scenic exhibitions of the Chinese, which may at any time be viewed by strangers who visit the country, and of which even persons ignorant of the language can form a sufficient judgment. "They have no scenical deception (observes the editor of the 'Heir in Old Age') to assist the story, as in the modern theatres of Europe; and the odd expedients to which they are sometimes driven by the want of scenery are not many degrees above Nick Bottom's 'bush of thorns and a lantern, to disfigure or to present the person of Moonshine'—or the man 'with some plaster, or some loam, or some roughcast about him, to signify Wall.'" Thus, a general is ordered upon an expedition to a distant province; he brandishes a whip, or takes in his hand the reins of a bridle, and, striding three or four times round the stage in the midst of a tremendous crash of gongs, drums, and trumpets, he stops short, and tells the audience where he has arrived. A tolerable judgment may be formed of what little assistance the imaginations of an *English* audience formerly derived from scenical deception, by the state of the drama and the stage as described by Sir Philip Sidney about the year 1583:—"Now you shall have three ladies walk to gather flowers, and then we must believe the stage to be a garden. By and by we have news of shipwreck in the same place; then we are to blame if we accept it not for a rock. Upon the back of that comes out a hideous monster with fire and smoke; and then the

miserable beholders are bound to take it for a cave; while in the mean time two armies fly in, represented with four swords and bucklers, and then what hard heart will not receive it for a pitched field?"

It is very true that the Chinese in their theatres leave more to the imagination than we do. They neither contrive that the action should all proceed on one spot, as in most specimens of the Greek tragedy, nor do they make use of shifting scenes. 'You can never bring in a wall,' says Snug the joiner,—so say the Chinese; and though their contrivances are not quite so outrageously absurd as those in the 'Midsummer Night's Dream,' they are scarcely more artificial. The truth, however, on this subject seems to be, that, though scenery and other adventitious aids of the kind no doubt tend to aid the illusion, they are by no means absolutely necessary to it; and in fact it is better to trust altogether to the imagination of the beholder than to fall into those palpable errors which even Dennis successfully ridiculed in Addison's 'Cato,' resulting as they did from a rigid adherence to the unity of place. The best scenic preparation that ever was devised must still call largely on the imagination for assistance; and the whole philosophy of the subject is summed up in the words of the Chorus to Shakspere's 'Henry V.:'—

"But pardon, gentles all,
The flat unraised spirit that hath dar'd
On this unworthy scaffold to bring forth
So great an object. Can this cockpit hold
The vasty field of France, or may we cram
Within this wooden O the very casques
That did affright the air at Agincourt?
O pardon, since a crooked figure may
Attest in little space a million;
And let us, ciphers to this great accompt,
On your imaginary forces work:——
Suppose within the girdle of these walls
Are now confin'd two mighty monarchies,

Whose high upreared and abutting fronts
The perilous narrow ocean parts asunder;
Piece out our imperfections with your thoughts,
Into a thousand parts divide one man,
And make imaginary puissance;" &c.

It is very possible that the delicate taste of the Greeks, alive to this difficulty, chose rather to evade than encounter it, by that rule which confined the number of interlocutors, at one time on the stage, to three persons. But then mark the consequence: half the events of the drama must be *told* to the audience; and in lieu of the stirring and active scenes which keep attention alive, and prevent the performance from flagging, we have those interminably long stories which may be beautiful taken by themselves, and constitute a fine dramatic poem for the closet, but are quite unsuited to the stage. In one of the plays of Æschylus, the 'Seven before Thebes,' there is a spy, or messenger, who comes in and describes in a speech of many pages the details of the whole siege, with the arms and accoutrements of the besiegers!

The costume, at least, of the Chinese stage is sufficiently appropriate to the characters represented, and on most occasions extremely splendid. Their gay silks and embroidery are lavished on the dresses of the actors; and as most of the serious plays are historical, and for obvious reasons do not touch on events that have occurred since the Tartar conquest, the costumes represent the ancient dress of China, which in the case of females is nearly the same now as ever, but, as regards men, very different.* The splendour of their theatrical wardrobe was remarked by Ysbrandt Ides, the Russian ambassador, as long ago as 1692: "First entered a very beautiful lady, magnificently dressed in cloth of gold, adorned with jewels, and

* The Insurgents of 1850 re-assumed the old Chinese dress.

a crown on her head, singing her speech with a charming voice and agreeable motion of the body, playing with her hands, in one of which she held her fan. The prologue thus performed, the play followed, the story of which turned upon a Chinese emperor, long since dead, who had behaved himself well towards his country, and in honour of whose memory the play was written. Sometimes he appeared in royal robes, with a flat ivory sceptre in his hand, and sometimes his officers showed themselves with ensigns, arms, and drums," &c.

As the Chinese make no regular distinction between tragedy and comedy in their stage pieces, the claims of these to either title must be determined by the subject and the dialogue. The line is in general pretty strongly marked: in the former, by the historical or mythological character of the personages, the grandeur and gravity of the subject, the tragical drift of the play, and the strict award of what is called poetical justice; in the latter by the more ordinary or domestic grade of the *dramatis personæ*, the display of ludicrous characters and incidents, and the interweaving of jests into the dialogue. Some of their stage pieces are no doubt of a vulgar and indecent description;* but these in general constitute the amusement of a particular class of society, and are generally adapted to the taste of those who call for them at private entertainments as already noticed. A list of the plays which the company of actors is prepared to represent is handed to the principal guest, who makes his selection in the way most likely to be agreeable to the audience.

The early travellers, as Bell and others, who have given an account of the impressions which they received from the Chinese theatrical performances, were able to judge of little more than the mere spectacle before them,

* Not much worse than those of Wycherley, &c.

and, being ignorant of the language, could give no account of the merits of the dramatic dialogue. The first specimen of a play was translated into French by the Jesuit Prémare, who, although actually resident at Peking, and a most accomplished Chinese scholar (as appears from his *Notitia Linguæ Sinicæ*), did not give more than the prose parts, leaving out the lyrical portions, or those which are sung to music, because, as he observes, "they are full of allusions to things unfamiliar to us, and figures of speech very difficult for us to observe." Voltaire made Prémare's translation of the *Orphan of Chaou* the groundwork of one of his best tragedies, 'L'Orphelin de la Chine:' it is founded on an event which occurred about a hundred years before the birth of Confucius. A military leader, having usurped the lands of the house of Chaou, is determined on exterminating the whole race. A faithful dependant of the family saves the life of the orphan, and male heir, by concealing him and passing off his own child in his stead. The orphan is brought up in ignorance of his real condition until he reaches man's estate, when, the whole subject being revealed to him by his tutor and guardian, he revenges the fate of his family on the usurper, and recovers his rights. In this plot Dr. Hurd remarked a near resemblance in many points to that of the 'Electra' of Sophocles, where the young Orestes is reared by his *pædagogus*, or tutor, until he is old enough to enact summary justice on the murderers of his father Agamemnon.

It would be easy to point out a number of instances in which the management of the Chinese plays assimilates them very remarkably to that of the Greek drama; and they may both be considered as *originals*, while the theatres of most other nations are copies. The first person who enters generally introduces himself to the audience

exactly in the same way, and states briefly the opening circumstances of the action. "These prologues (observes Schlegel) make the beginnings of Euripides' plays very monotonous. It has a very awkward look for a person to come forward and say, 'I am so and so, this and that have been done, and what comes next is thus and thus.'" He compares it to the labels proceeding from the mouths of the figures in old paintings; and there certainly appears the less need for so inartificial a proceeding on the Greek stage, inasmuch as the business of the prologue, or introduction, might have been transferred to the chorus. The occasional, though not very frequent or outrageous violation of the *unities* in the Chinese drama may easily be matched in most other languages, and examples of the same occur even in some of the thirty-three Greek tragedies that remain to us; for the unity of *action* is not observed in the 'Hercules Furens' of Euripides; nor that of *time* in the 'Agamemnon' of Æschylus, the 'Trachynians' of Sophocles, and the 'Suppliants' of Euripides; nor that of *place* in the 'Eumenides' of Æschylus. The unimportance, however, of a rigid attention to these famous unities has long since been determined, and it is admitted that even Aristotle, to whom they have all been attributed, mentions only that of action at any length, merely hints at that of time, and of place says nothing whatever.

Prémare's specimen of the Chinese stage was followed, at the distance of about a century, by the author's translation of the 'Heir in Old Age,' which is in fact a comedy from the same collection (the hundred plays of Yuen) that had afforded the former sample. In this the translator supplied, for the first time, the lyrical or operatic portions which are sung to music, as well as the prose dialogue, having endeavoured, as he observes in the introduction, "to render *both* into English in such a manner

as would best convey the spirit of the original, without departing far from its literal meaning." This was the more likely to be efficiently performed, as he was then resident in the country, and could avail himself of native references. The 'Heir in Old Age' serves to illustrate some very important points connected with Chinese character and customs. It shows the consequence which they attach to the due performance of the oblations at the tombs of departed ancestors, as well as to the leaving male representatives who may continue them; and at the same time describes the ceremonies at the tombs very exactly in detail. The play serves, moreover, to display the true relation of the handmaid to the legitimate wife, and proves a point on which we have before had occasion to insist, that the former is merely a domestic slave, and that both herself and offspring belong to the *wife*, properly so called, of which a man can legally have only one.*

To give a brief abstract of this play from the introductory memoir—the *dramatis personæ* are made up entirely of the members of a family in the middle class of life, consisting of a rich old man, his wife, a handmaid, his nephew, his son-in-law, and his daughter. The old man, having no son to console him in his age, and to perform the obsequies at his tomb, had, like the Jewish patriarch, taken a handmaid, whose pregnancy is announced at the

* In the Penal Code there are some express safeguards for the rights of a wife, and it is provided that any man degrading his legal wife to the situation of a handmaid shall be punished with one hundred blows; and that he who during the life of his legitimate spouse treats any handmaid on an equality with her shall receive ninety blows, and both parties be restored to their proper stations. It is added, "He who, having a *wife*, marries *another* wife, shall be punished with ninety blows, and the second marriage shall be void." The notes on this law observe that "a wife is one whose person is equal in rank to that of her husband; a handmaid, one who is merely admitted to his presence."

opening of the play, in which the old man commences with saying, "I am a man of Tung-ping-foo," &c. In order to obtain from heaven a son, instead of a daughter, he makes a sacrifice of sundry debts due to him, by burning the bonds, and this propitiatory holocaust serves at the same time to quiet some scruples of conscience as to the mode in which part of his money had been acquired. He then delivers over his affairs to his wife and his married daughter, dismissing his nephew (a deceased brother's son) with a hundred pieces of silver to seek his fortune, as he had been subjected at home to the persecution of the wife. This done, the old man sets out for his estate in the country, recommending the mother of his expected son to the humane treatment of the family, and with the hope of receiving from them speedy congratulations on the birth of a son.

The son-in-law now betrays to the daughter his disappointment at the expected birth, since, if it prove a girl, they shall lose half the family property, and, if a son, the whole. His wife quiets him by a hint how easily the handmaid may be got rid of, and the old man persuaded that she had suddenly disappeared; and shortly afterwards both the son-in-law and the audience are left to infer that she had actually contrived to make away with her. In the mean time the old man waits the result in great anxiety; his family appear in succession to console him for the loss of his hopes. In the bitterness of his disappointment he bursts into tears, and expresses his suspicions of foul play. He then attributes his misfortunes to his former thirst for gain, resolves to fast for seven days, and to bestow alms publicly at a neighbouring temple, in the hope that the objects of his charity may treat him as a father. Among the beggars at the temple his nephew appears in the most hopeless state of poverty,

being reduced to take up his lodging under the furnace of a pottery; he is insulted by the son-in-law, and reproached by the old man; but his uncle, moved with compassion, contrives to give him a little money, and earnestly advises him to be punctual in visiting the tombs of his family at the approaching spring, assuring him that a due attention to those sacred rites must ultimately lead to prosperity. It is on the importance attached to the sepulchral ceremonies that the whole drama is made to turn.

The nephew accordingly appears at the tombs, performs the oblations as well as his poverty will admit, and invokes the shades of his ancestors to grant him their protection. He no sooner departs than the old uncle appears with his wife, expressing their indignation that their own daughter and son-in-law had neglected to come with the customary offerings. They observe from the appearances at the sepulchre that their nephew must have been there. The scene at the tombs, and the reflections of the old man thereon, have considerable interest; he reasons with his wife, and convinces her that the nephew is nearer in blood and more worthy than the son-in-law; she relents, and expresses a wish to make him reparation; he appears—a reconciliation takes place—and he is received back into the family. The son-in-law and daughter now enter with a great bustle, and a procession, to perform the ceremonies, but are received with bitter reproaches for their tardy piety and ingratitude, and forbidden to enter the doors again.

On the old man's birthday, however, they desire permission to pay their respects, when, to the boundless surprise and joy of the father, his daughter presents him with the long-lost handmaid and child, both of whom, it appears, had been secreted by the daughter unknown to

her jealous husband, who supposed they were otherwise disposed of. The daughter is taken back, and the old man divides his money in three equal shares, between her, his nephew, and his newly-found son; the play concluding with expressions of joy and gratitude that the venerable hero of the piece had obtained "an heir in his old age." Such is the brief outline of the story, which arises entirely out of the misery resulting from the want of a male heir to perform the oblations at the tombs. The events follow each other in so natural and uninterrupted a manner, that the time employed in the course of the piece, which is three years, would not be perceived but for the age of the child brought forward in the concluding act. The play, including the proëm, or introductory portion, consists in reality of just *five* acts, and this peculiar division is common to the *Hundred Plays*, from which this and the other translated specimens have been taken.

These separate portions of the play, however, are not so distinctly marked on the Chinese stage as on ours, there being little need of preparation or change of scene, and the division seems to exist rather in the book than in the representation. The first or introductory portion is called the "opening," and the remaining four are styled "breaks." All the directions to the actors are printed as in our stage-books. "Ascend" and "descend" are used for *enter* and *exit*, and to speak *aside* is expressed by a term which means to "say at the back" of any person. Thus in one of the Hundred Plays, an intriguing lover, who meets his mistress by appointment, exclaims on seeing her, as any other Lothario might do, "*(aside)* She has changed her habit of yesterday, and truly looks like a divinity." In the Chinese play-books certain invariable words or names are adopted to mark the particular relations of the different *dramatis personæ*, as the first and

secondary male and female characters (the *prima donna*, &c.), and these are used in every play indiscriminately, whether its complexion be tragic or comic. The musical portions, in accordance with the Chinese theory of poetry, express the most passionate parts, and therefore belong only to the principal characters. In this respect there is no resemblance to the Greek theatre, where the *chorus*, as a distinct body, sang together, or in responsive parts called strophe and antistrophe; while certain spoken portions were delivered by their Coryphæus, or leader, who therefore speaks in the singular number.

In another specimen of the Chinese theatre, which is of a tragic cast, and turns on the misfortunes of one of the native emperors contending against the Mongol Tartars, the translator has followed the example of Prémare, and having before (for the first time) given a drama in its whole details, including the lyrical portions, confines himself on this occasion chiefly to the spoken dialogue and the principal course of the action. Love and war constitute the whole subject of the piece, of which the moral is to expose the evil consequences of luxury, effeminacy, and supineness in the sovereign. The story is taken from that portion of the Chinese annals previous to the first conquest by the Mongols, when the declining strength of the government emboldened the Tartars in their aggressions, and gave rise to the system of propitiating those barbarians by tribute, and by alliances with the daughters of China. The play opens with the entrance of the Tartar Khan, who thus προλογιζει :—

"We have moved to the south, and approached the border, claiming an alliance with the imperial race. I yesterday despatched an envoy with tributary presents to demand a princess in marriage, but know not if the emperor will ratify the engagement with the customary

oaths. The fineness of the season has drawn away our chiefs on a hunting excursion amidst the sandy steppes. May they meet with success!—for we Tartars have no fields; our bows and arrows are our sole dependence."

[*Exit.*

Then appears the emperor's chief minister and favourite, who in a soliloquy makes known the system by which he governs his master, persuading him "to keep aloof from his wise counsellors, and seek all his pleasures among the women of his palace." To him enters the emperor, and, after a consultation, it is settled that the minister shall proceed diligently through the realm in search of the most beautiful ladies, and furnish his master with faithful portraits of them, as a means of fixing his choice. He abuses his commission, however, and makes it an occasion for extorting bribes from those who seek the benefit of the alliance. The most beautiful of all is daughter to a cultivator of the land, who has not the means of satisfying the rapacity of the minister; and the latter, in order to be revenged, misleads the emperor by presenting him with a disfigured portrait of the fair one. Chance, however, throws her in the emperor's way, who is struck by her beauty, and the secret is now discovered, as he at once learns from her how he has been deceived by his favourite.

"Keeper of the Yellow gate, bring us that picture, that we may view it. (*Sees the picture.*) Ah! how has he dimmed the purity of the gem, bright as the waves in autumn! (*To the attendant.*) Transmit our pleasure to the officer of the guard to behead Maou-yen-show, and report to us his execution."

The traitor, however, contrives to escape, and carries his head safely upon his shoulders to the Tartar camp, where he exhibits a true likeness of the lady to the barba-

rian king, and persuades him, with ingenious villany, to demand her of the emperor. An envoy is immediately despatched by the Khan, who adds, "Should he refuse, I will presently invade the south: his hills and rivers shall be exposed to ravage." The unfortunate emperor's fondness continues to increase, and the arrival of the Tartar envoy fills him with perplexity and despair. He calls on his servants to rid him of these invaders, but they bewail the weakness of the empire, point out the necessity of the sacrifice, and call on his majesty to consult the peace and safety of his realms by complying with the Khan's demand. He consents, after a struggle, to yield up the beauty, who is now a princess, but insists on accompanying her a portion of the way. The parting scene has considerable interest, and the language of the imperial lover is passionate to a degree that one is not prepared to expect. Then at length comes the catastrophe. The Tartar retires with his prize, until they reach the banks of the river Amoor or Saghalien, which falls into the sea of Ochotsk.

"*Princess.* What place is this?

"*Khan.* It is the river of the Black Dragon,* the frontier of the Tartar territories and those of China. This southern shore is the emperor's—on the northern side commences our Tartar dominion.

* In this name the Chinese have translated the Tartar, *Saghalien oula*, "Black Water River," by Black Dragon River. The same fabulous monster is common to the mythological literature of ancient Europe and China, being always described and represented as a scaly serpent with claws, fraught with fire and smoke.

πυρος
Δρακοντ' ανάβλεποντα φοινιαν φλογα.

The Chinese dragon is in reality a *hydra*, but with one head; and we may perceive in the analogy between the *waving* track of the monster, and the *serpentine* course of rivers, a similar origin for the hydras of Greece and China.

Princess—(*to the Khan*). Great king, I take a cup of wine, and pour a libation towards the south—my last farewell to the emperor. (*Pours the libation.*) Sovereign of Hân, this life is finished: I await thee in the next!" With these words she throws herself into the river, and perishes; and here the tragedy might properly end. The Khan in great sorrow decrees her a tomb on the river's bank, and, with more generosity than might have been expected from him, remits all further demands on the emperor; directing that the wicked cause of these misfortunes shall be delivered over to the Chinese, to receive the just reward of his misdeeds. But the piece continues through another act, in which the emperor's sorrows are either said or sung, until he is at length pacified by the death of the traitor.

Another specimen from the Hundred Plays has been translated in France by M. Stanislas Julien, professor of Chinese at Paris. As in the previous instance of the 'Heir in Old Age,' he has given a version of the whole drama, including both the prose and the lyrical parts, and promises some further samples of the same kind. The name of the piece which he has rendered into French is *Le Cercle de Craie*, "the chalk ring or circle," founded on the principal incident in the piece, which is in fact so like the *Judgment of Solomon*, that it might lead one to believe the Chinese play had been borrowed from some obscure tradition or report of it. Two women claim to be the mothers of the same child before a judge, who, in order to get at the truth, orders a chalk ring to be drawn on the floor of the court, and the contested child placed in the middle of it. He then declares that the child shall belong to whichever of the women may succeed against the other in pulling it out of the circle. The feigned mother, having no compunction for the infant, gets the

better of the real one, who from her maternal tenderness for the child is afraid of exerting her whole strength; and the sagacious judge, "a second Daniel come to judgment," gives the cause in favour of the right claimant. With this last specimen we conclude our sketch of the Chinese theatre.

A very full and detailed notice of Chinese poetry has been printed in the Royal Asiatic Transactions,* with numerous examples, but we have not room in this place for more than an abstract of the subject. Some account of their earliest poetry has been already given in the thirteenth chapter, where the 'Book of Songs' was mentioned with the other ancient classics. In later times the structure of their verse has undergone considerable improvements, and there have been particular periods or eras of their history when the art of poetry has been especially cultivated. They compare its progress, themselves, to the growth of a tree—"The ancient 'Book of Odes' may be likened to the roots; when *Soolo* flourished, the buds appeared; in the time of *Kien-gân* there was abundance of foliage; but during the *Tâng* dynasty many reposed under the shade of the tree, and it yielded rich supplies of flowers and fruit." This Augustan age of Chinese poetry was in the eighth century of our era, or about 1100 years ago, when the whole of Europe was involved in barbarism and ignorance.

It has generally been supposed that the Chinese words are entirely monosyllabic (though this is not always strictly the case), and hence it might be imagined that their versification could not be susceptible of much melody. This, however, would not necessarily follow, for Pope himself, one of the smoothest of our versifiers,

* Vol. ii. p. 393, 4to.

has whole couplets consisting of mere monosyllables; for instance—

> "Ah, if she lend not arms as well as rules,
> What can she more than tell us we are fools?"

The truth, however, is, that the Chinese abounds with diphthongal as well as dissyllabic sounds, which contribute, when blended with others that are strictly monosyllabic, to give to its verse a certain share of varied euphony. In addition to this, it derives cadence and modulation from the use of certain tones or accents, which appear originally to have owed their existence rather to the necessity of perspicuity in speech than of melody in verse. Another source of harmony is the use of what may strictly be called *poetic numbers*. Every word of Chinese poetry corresponds to a metrical foot in other languages. The shortest consists sometimes of as few as *three*, repeated as a kind of chorus in songs; and this measure occasionally serves as a species of chiming verse for the inculcation of moral maxims. With the same view to assisting the memory, it has been adopted in the composition of the *San-tse king*, 'Trimetrical Classic,' a work which conveys to Chinese youth the rudiments of general knowledge.

The line of four words constitutes the chief part of the 'Book of Odes' before mentioned. There, however, the measure of some pieces is altogether irregular, varying from three to seven or eight words in a line. Poetry in most countries begins with being the vehicle of religion and morality, and the first record of historical facts. Venerated at first as the language of wisdom or inspiration, it is at length cultivated as a pleasurable art, and never fails to improve in harmony, however it may degenerate in other points, with the progress of time. For the

same reason that Pope is more harmonious than Chaucer or Donne, Boileau or Racine than Ronsard, Virgil or Tibullus than old Ennius, so the poetry of China, from the eighth century down to the present time, is in point of mere versification a great improvement on the 'Book of Odes.' The improved system of versification consists in lines of five words, as well as in the longer measure of seven; but for examples of all these the reader must be referred to the treatise on Chinese poetry.*

Besides a regular cæsural pause in a particular part of each verse (which we cannot dilate upon here), they have, in common with most other peoples, the use of *rhymes*, of which it may be principally observed that they occur at the termination of every second verse. The length of the stanza is determined by the recurrence of the same rhyme, and in a poem of any length it is generally of four lines only, that is, a quatrain, whose second and fourth lines rhyme together; but occasionally eight or more verses will have the same ending. In our own Spenserian stanza the same rhyme occurs four times in the course of nine lines. The Chinese, however, do not seem to possess a very nice ear for the perception of true rhymes; and this inaccuracy may partly arise from their not having such precise symbols or marks of sound as our alphabetic letters.

The next feature in the construction of Chinese verse (observes the treatise already referred to) presents a striking coincidence with what has been remarked of the poetry of another Asiatic nation. In the preliminary dissertation on Hebrew poetry, prefixed to his translation of Isaiah, Bishop Lowth has treated at some length of a peculiar property which he calls *parallelism*, consisting of the correspondence of one verse with another, either in

* Royal Asiatic Transactions, vol. ii. p. 393.

equivalency or opposition of sense, or in the form of grammatical construction. The learned prelate adduces examples of these different sorts of parallelism from the Psalms; as, for instance—

"The memory of the just is a blessing:
But the name of the wicked shall rot."—

"Dart forth thy lightnings and scatter them:
Shoot out thine arrows and consume them."

There are perpetual examples in the Chinese, answering to the above description of the Hebrew; and the peculiar structure of that language generally renders the parallelism much more exact, and therefore much more striking, as it is usually word for word, the one written opposite to the other. The following is a translation of such parallelisms, taken from the 'Heir in Old Age,' but it can of course but imperfectly represent the original:—

"Supinely gazing, now I vent my sighs,
Now, bending down, in tears my sorrow flows;
The wealthy alien claims connubial ties—
The needy kinsman no relation knows."

To proceed from the structure of Chinese verse to the character of their poetry—this seems to consist principally of odes and songs, of moral and didactic and of sentimental and descriptive pieces; which different kinds, however, are so blended together, and run so much into one another, that it would not always be easy to separate them. One of the most ancient pieces in the 'Book of Odes,' the date of which may perhaps reach to *three thousand* years, has reference to the pain felt by the poet at the unworthy conduct of some ungrateful friend. The allusions to the storm, &c., are of course figurative; and the translation of this antique specimen may serve to show

the similarity that pervades the tone of human sentiment in the most distant ages and countries:—

"Now scarce is heard the zephyr's sigh
To breathe along the narrow vale;
Now sudden bursts the storm on high,
In mingled rush of rain and hail:
—While adverse fortune louring frown'd,
Than ours no tie could closer be;
But, lo! when ease and joy were found,
Spurn'd was I, ingrate—spurn'd by thee!

Now scarce is felt the fanning air
Along the valley's sloping side;
Now winds arise, and lightnings glare,
Pours the fell storm its dreadful tide!
—While fears and troubles closely press'd,
By thee my love was gladly sought;
But once again with quiet bless'd,
Thou view'st me as a thing of nought!

The faithless calm shall shift again,
Another gale the bleak hill rend,
And every blade shall wither then,
And every tree before it bend:
—Then shalt thou wail thy lonesome lot,
Then vainly seek the injur'd man
Whose virtues thou hadst all forgot,
And only learn'd his faults to scan."

The style of descriptive poetry among the Chinese may perhaps be best shown by the way in which they describe *ourselves*, for which purpose are selected the following stanzas from a poem on London, written as long ago as 1813, by a person better instructed than the generality of his countrymen who quit the celestial empire to travel abroad. This singular production has already excited some notice, and been quoted in several publications from the treatise in the Royal Asiatic Transactions, where it was printed with the original text,* and where the trans-

* It has been found in the possession of Chinese, and led to the mistaken application of *London* for *England*.

lator observed that the poem, being a simple description, contains few flights of fancy. As it would, therefore, have been a hopeless attempt, however well they may sound in Chinese, to give dignity in verse to matters so perfectly domestic and familiar to ourselves, it was judged best to afford a literal prose translation, but with all the extravagancies and hyperboles of the original.

I.

Afar in the ocean, towards the extremities of the north-west,
There is a nation, or country, called England:
The clime is frigid, and you are compelled to approach the fire;
The houses are so lofty that you may pluck the stars.
The pious inhabitants respect the ceremonies of worship,
And the virtuous among them ever read the sacred books.
They bear a peculiar enmity towards the French nation,
The weapons of war * rest not for a moment (between them).

II.

Their fertile hills, adorned with the richest luxuriance,
Resemble, in the outline of their summits, the arched eyebrows (of a fair woman):
The inhabitants are inspired with a respect for the female sex,
Who in this land correspond with the perfect features of nature;
Their young maidens have cheeks resembling red blossoms,
And the complexion of their beauties is like the white gem:
Of old has connubial affection been highly esteemed among them,
Husband and wife delighting in mutual harmony.—— . . .

V.

The two banks of the river lie to the north and south:
Three bridges † interrupt the stream, and form a communication:
Vessels of every kind pass between the arches,
While men and horses pace among the clouds (fogs?):
A thousand masses of stone rise one above the other,
And the river flows through nine channels:
The bridge of Loyâng, which outtops all in our empire,
Is in shape and size somewhat like these —— . . .

* Written in 1813.

† Old London, Blackfriars, and Westminster bridges were then the only three in existence.

VII.

The towering edifices rise story above story,
In all the stateliness of splendid mansions:
Railings of iron thickly stud the sides of every entrance,
And streams from the river circulate through the walls.
The sides of each apartment are variegated with devices;
Through the windows of glass appear the scarlet hangings;
And in the street itself is presented a beautiful scene;
The congregated buildings have all the aspect of a picture . . .

IX.

The spacious streets are exceedingly smooth and level,
Each being crossed by others at intervals:
On either side perambulate men and women,
In the centre career along the carriages and horses;
The mingled sound of voices is heard in the shops at evening;
During winter the heaped-up snows adhere to the pathway:
Lamps are displayed at night along the street sides,
Whose radiance twinkles like the stars of the sky.—&c.

It remains to take some notice of the Chinese works of fiction, in the shape of moral tales, novels, and romances, which, by the aid of printing, so early invented, have become altogether innumerable. Among them, however, some have of course grown more famous and popular than others, and a very few are ranked under the title of *Tsae-tsze*, or "works of genius." Under the existing system of exclusion from the interior of the country, to which all Europeans are subject, they are perhaps the best sources to which we can address ourselves in order to obtain a knowledge of the every-day habits of the people. As the writers address themselves solely to their own countrymen, they need not be suspected of the spirit of misrepresentation, prejudice, and exaggeration, with which the Chinese are known to speak of themselves to strangers. An odd instance of this kind once occurred at Canton. A native, being told that the King of England was accustomed, on particular occasions, to be drawn in a

carriage with *eight* horses, answered with the utmost readiness, "China Emperor *twenty-four!*"

Many of the Chinese novels and romances which were written in the fifteenth century of our era, and some much earlier than that date, would contrast very advantageously, either as literary compositions or as pictures of society, with their contemporaries of Europe. The Chinese at that period were long past the stage of civilization which gives birth only to apologues or extravagant fictions, and could relish representations of actual life, and of the complicated situations into which men are thrown by the contests of interest and of passion in an artificial state of things. Their novels and romances paint Chinese society as it really exists; and if they are on this account less amusing for children, they may be more interesting to such grown persons as have the curiosity to contemplate a state of civilization which has grown up of itself, and owes none of its features to an intercourse with Europe, or with the rest of the world.

Under the existing circumstances (we repeat) of our exclusion from the interior of the country, these works have a peculiar value, as they supply the information regarding manners, customs, and sentiment, which might otherwise be obtained from the observation of travellers, but can at present be gained only from books. Late changes in the trade have excited the jealousy and raised the vigilance of the government to a degree which may render the access to any spot, except Canton, more difficult than ever; and the barrier seems to be one which nothing but a change in the present Tartar dynasty, or a successful appeal to arms, can remove.* Under these circumstances, we must acquire our knowledge of the

* This was written in 1835, and the successful appeal to arms has only partially removed the barrier.

country from native works: and the minuteness which characterizes their pictures of social life is particularly calculated to make us familiar with its most intimate recesses. M. Rémusat observes of them, "C'est dans la peinture des détails qu'excellent les romanciers Chinois, et c'est encore en cela qu'on peut les rapprocher de Richardson, de Fielding, ou tout au moins du Docteur Smollet, et de Mademoiselle Burney. C'est par là que les uns et les autres sont intéressants, vrais, habiles à faire ressortir les traits des passions, à dessiner les caractères, à produire un haut degré d'illusion. Leurs personnages ont, comme on dirait à présent, toute la réalité possible. On a véritablement fait connaissance avec eux quand on les a vu agir ou entendu parler, quand on les a suivis dans les particularités minutieuses de leur conversation." *

The 'Fortunate Union' may be considered as a favourable specimen of these native pictures of life and manners. To quote the preface, "The interest and bustle of the scene, the spirit of the dialogue, the strong delineation and strict keeping of all the characters, joined to the generally excellent moral that is conveyed throughout, may serve to impress us with no unfavourable sentiments in regard to Chinese taste. The story commences with an act of generous devotion on the part of the hero, and the gratitude of the person whom he obliges becomes the ultimate occasion of his own triumph over the combinations of his enemies. The profligate, the malicious, and the base, when they have exhausted all the resources of ingenuity, meet with their just reward; while rectitude, prudence, and courage carry their possessors not only unharmed but glorious through every trial.

"In the hero and heroine are accurately described the

* Preface to *Les Deux Cousines.*

principles of the Confucian sect of philosophy, a sect which, in its professed admiration of virtue, and in its high tone of self-sufficiency and pride, assimilates somewhat to the ancient Stoics. As we often find in our own favourite fictions, a number of the names have a reference to the characters of those who bear them. Thus the hero is named from *iron* (quasi Ironside); the heroine is *ping-sin*, icy-hearted—a term, however, which in her country means chaste, and not what we should call cold-hearted. There are many remarkable points of resemblance between the 'Fortunate Union' and our own novels and romances at the present day. Every chapter is headed by a few verses bearing some relation to its contents, and appropriate lines are occasionally introduced as embellishments to the story. Except in some highly sustained dialogues, the prose parts convey the tone of ordinary conversation or narrative."

As the above work is rather celebrated among the Chinese themselves, and may serve as a sample of the particular department of literature to which it belongs, such readers as have not seen the English translation may like to be furnished with an outline. The hero of the 'Fortunate Union' is a young student named Teih-chungyu, whose family residence is at one of the chief cities of the province in which Peking is situated, but about two hundred and fifty miles from the capital. He is beautiful in person, but with a disposition naturally harsh and inflexible, and an irritable temper, which is however set off by some generous qualities, and a ready desire to succour persons in distress. His father belongs to that privileged class of *Censors* by which the constitution of the Chinese government is so singularly distinguished, and he is marked by the boldness and uprightness of his advice to his sovereign. The son, on account

of his hasty temper, is not taken to his father's official residence at Peking, but left at the family house in the province. At sixteen his parents had thought of choosing him a wife, but this was postponed at his own desire, and he continues his studies in solitude until the age of twenty, when, as he is one day reading at home, he comes upon the history of a minister famed in Chinese annals, who fell a victim to the honesty with which he reproved his sovereign.

Reflecting on this incident, it occurs to him that similar fidelity might expose his father to a similar fate; his anxiety leads him to determine on proceeding to Peking. On his way thither he puts up for the night at a village, where he hears the story of a young student who, through the violence of a powerful noble, had lost the bride to whom he had been contracted in marriage. His enemy had seized the unfortunate lady, and shut her up in a retired palace, conferred on him by the emperor for very different purposes. Falling in, soon after, with the student himself, the youth inquires the particulars of his case, and promises to have his memorial presented to the emperor. On reaching Peking, our hero found his apprehensions realized regarding his father, who had given umbrage to the emperor, and been thrown into prison, for the zeal with which he exerted himself in this very case of the young student. The matter had been referred to the criminal board; but the guilty noble contrived, by his wealth and influence, to remove every species of evidence: and then, persuading the emperor that the Censor had been deceiving him, he procured the degradation and imprisonment of the latter.

The hero proceeds at once to his father's place of confinement, and surprises him by producing the young student's memorial, which of itself is sufficient to excul-

pate the Censor. They send a joint representation to the emperor, praying for a secret warrant to apprehend all the parties concerned. This is obtained, and the youth, taking a brazen mace in his hand, sallies forth quietly, and contrives to make his way into the secluded palace of the guilty noble. He there finds all the objects of his search; the ravisher, who at first makes a bold resistance, is roughly handled, and the lady set at liberty. The Censor is restored to his former rank and dignities, and even promoted by the emperor, who punishes the convicted noble, and highly lauds the courage and zeal of the youth by whom this had all been brought about. The fame of Teihchungyu exposes him to so much notice at Peking, that his father, dreading the effects of flattery and envy, advises his leaving the capital, and proceeding on a "tour of instruction," which in China often forms a part of education, but is of course confined to the limits of their own vast empire.

In a district of the adjoining province of Shantung is the family residence of a member of the military tribunal at Peking, who has no son, but a daughter named Shueypingsin, of exquisite beauty, with mental endowments equal to her personal charms. To her, his wife being dead, is intrusted the charge of his household and estate, while compelled by his office to reside at the capital. A worthless brother of this mandarin, named Shueyun, who has three sons and an ugly daughter, casts a longing eye on his large estate; the management of which, in default of male heirs to his brother, would come to himself on the marriage of Shueypingsin, his niece. His great object, therefore, is to bring this about, and (encouraged by the banishment of his brother, for some official error, into Tartary) he conspires with a young profligate of rank, but of notorious bad character, who is determined to

obtain the reluctant young lady in marriage, having seen her by stealth with the connivance of the uncle. She pretends to comply; but, by a series of dexterous contrivances, in which she avails herself of the various forms and preliminaries of Chinese courtship, causes her designing but stupid uncle to impose upon the young rake his *own* ugly daughter. The rage of the disappointed suitor is great on detecting this trick, when it seems too late to be remedied; but the uncle, with characteristic baseness, suggests a scheme to pacify him, whereby the lonely and defenceless Shueypingsin may be still entrapped into the possession of her lover, claimed as his wife, and the real wife, his own daughter, reduced to the condition of a handmaid! This scheme is so plausibly contrived, that the young lady narrowly escapes "falling into the dragon's jaws." The interest is here highly dramatic; the good sense and presence of mind of the heroine coming to her aid in the very crisis of her fate. The failure of their plot fills the uncle and suitor with rage and shame, but all hands are compelled to admire the ingenuity and understanding of Shueypingsin.

Another scheme is then devised by the indefatigable and abandoned suitor, to seize the heroine by force while returning from a filial visit to her mother's tomb, where she proceeds, according to custom, to perform the rites at the autumnal season. The young lady's suspicions are excited in time; she says nothing, but, changing her dress, steps into the chair of a female attendant, having before secretly placed a bundle of stones in her own sedan, and shut it up. This is waylaid on the return, and forcibly carried off by the lover and his attendants; while Shueypingsin proceeds quietly and safely towards her home. The empty chair is opened amidst shouts of laughter from the neighbours and acquaintance of the libertine,

who have thus been assembled only to witness his disgrace and disappointment. They counsel him to give up the pursuit of a person whose actions seem to prove that she is something more than human; but his rage and ardour are only inflamed by these unexpected crosses; and he at length falls upon a third scheme.

He had resolved to seize her by force, but, as she now kept her doors barred against strangers, fraud was necessary to obtain admission. A forged document is accordingly produced at her gate, purporting to be an account of her father's recall from exile. This gains entrance for the partisans and domestics of her abandoned admirer, by a numerous party of whom she is instantly surrounded. She desires to be conveyed to the magistrate, at the same time concealing in her sleeve a small dagger, which may still avail her at her utmost need. As the magistrate is the friend and ally of the suitor, they readily comply with her desire, and hurry the young lady off in her chair "like a flight of crows or swallows on the wing."

The hero, Teihchungyu, whom we left on the point of proceeding on his travels, has just entered the town, and is riding leisurely along, when, in turning a corner, he meets the cortège, and comes violently in contact with the chair that contains Shueypingsin. Being nearly thrown by the shock, he seizes with characteristic energy upon one of the party; but, having received a suitable explanation, he is about to loose his hold, when a plaintive female voice from within the chair exclaims, "I am suffering violent wrong, and rely on your bravery for succour." As any other knight-errant might do, he takes the whole party prisoners,—"surrounding" them, like the Irishman—and brings them to the tribunal of the magistrate, who is sitting ready prepared to give judgment in favour of his profligate friend. Our hero strikes

on the great drum at the gate, and, boldly entering the court, addresses the judge on terms of equality. The latter, however, is not deterred from awarding Shueypingsin to her suitor; which so rouses the indignation of Teihchungyu, that he interferes in a manner which intimidates the compliant magistrate. He becomes acquainted with the rank and condition of the hero, and is obliged to return Shueypingsin in safety to her own home.

Teihchungyu, in the mean while, becomes *éperdu* by the extraordinary beauty of the young lady whom he had thus rescued, exposed as she is to his gaze in the court of the judge; and her gratitude, for the service rendered her, is at least equal to his admiration. The discomfited suitor in revenge now engages some villanous priests, at the Budhist monastery where our hero had put up according to Chinese custom, to poison him in his food! Shueypingsin, who well knew the characters with whom he had to deal, employs emissaries to keep her regularly informed of what is going on. These acquaint her with the youth's illness; she guesses the whole truth, and, as the only means of saving his life, adopts the bold measure of removing him to her own house, to which he assents, though reluctantly, on account of the slander to which it may expose Shueypingsin. Arrived there, he is soon restored to health; though without ever seeing his hostess, and with the observance of the most rigid forms of Chinese decorum.

The enemy, on finding that their intended victim had escaped, endeavour to foil and perplex the heroine by sending her uncle to remonstrate with her on the irregularity of admitting the youth into the house. She, however, justifies her conduct by the urgency of the case, by the gratitude she owes Teihchungyu, and by telling her

uncle that he would better show his solicitude for her by prosecuting the wretches from whose hands she had lately been rescued. After an ineffectual attempt to get up an accusation against the young people, by introducing a spy into the lady's house, whose evidence only places her conduct in a fairer light, they are obliged to give up the case as desperate. The hero, on his recovery, of course takes his departure with increased feelings of regard to his hostess, and, after meeting with some other adventures which are calculated to put his address or courage to the test, he proceeds home with the determination to prepare himself for the next public examination of literary graduates.

Shueypingsin's indefatigable suitor meanwhile makes one more attempt to get possession of the young lady, by engaging the services of a newly-arrived imperial commissioner, a friend and protégé of his father at court. From this corrupt officer a warrant or licence is obtained to espouse the maiden at her own house, according to a form which in particular cases is sanctioned by Chinese law. Shueypingsin is now driven to prepare a secret memorial to the emperor himself, which she first despatches to Peking by a private emissary, and then appeals publicly to the commissioner, on whose refusal to aid her she exhibits the memorial which she had already sent up against him, and fills him with consternation. On his countermanding the nuptials, she is induced to send off a despatch for the recall of her messenger. Teihchungyu now learns what is going on during his absence, and, with the view of protecting his mistress, hurries off to Shantung province, which he reaches in a few days. On his first arrival he is seen by the profligate uncle, who soon makes his friend the suitor acquainted with the event. They try to entrap him, by sending a cunning boy with

a pretended message from Shueypingsin, appointing an assignation at the back gate of her house. The inconsistency of this message with the lady's character opens his eyes to the fraud, and, seizing the boy, he forces him by threats to confess it is a trick of his enemies.

The next step is to devise another plot against our hero, whose abandoned rival calls at his lodgings, and, on being denied, leaves a ceremonial ticket. This compels Teihchungyu to return the call, for which his enemy is prepared with an entertainment, to which the youth is, much against his will, detained. It is concerted that a number of rakish fellows should join the party one by one, and get up a quarrel, in which, with their assistance, the host may revenge himself by maltreating Teihchungyu. His coolness, courage, and strength, however, avail him as usual; and when a fray becomes inevitable, he completely discomfits the drunken party, and leaves them vowing loud vengeance. The description of this Chinese entertainment, and of the growing row, is highly characteristic, and proves that the most ceremonious of people can sometimes be the most unceremonious. The defeated party lodge a false charge against the hero, but the result redounds to their entire shame and disgrace.

Circumstances subsequently enable Teihchungyu to be of essential service to the exiled father of the heroine, and to procure at length his recall from banishment, and reinstatement in his former honours. The families of the youth and maiden being thus drawn together, a proposed alliance is the natural consequence. The ultra refinement, however, of the Confucian school imposes scruples on the parties, lest such a consummation should lead the world to misconstrue the disinterested nature of their former intercourse. These scruples being overcome, fresh plots are laid by their enemies to oppose their union;

and as the affair, from the rank of the parties, at length comes before the emperor in person, an investigation is set on foot, which exposes the wickedness of the other faction, and leads to the marriage being sanctioned with high encomiums from the "Son of Heaven" himself. All parties are punished or rewarded according to their deserts, and thus the 'Fortunate Union' is concluded.* The interest of the story is sustained throughout, by the Chinese author, with more skill and effect than in most native productions; and as a genuine picture of manners it is among the best suited to the use of those who desire, according to the expression of a French writer, "connâitre les Chinois par les Chinois eux-mêmes."

* 2 vols. 8vo. 1829.

CHAPTER XIX.

ARTS AND INVENTIONS.

Printing — Printed books — Paper — Ink — Gunpowder — Mariner's compass — Variation of Needle — Navigation — Obstacles to improvement — Industrial arts — Cleaning cotton — Candle-making — Metallurgy — Metallic mirrors — Carving — Tools — Silk manufacture — Silkworms — Porcelain manufacture — Egyptian bottle — Lackered ware — Fine arts — Drawing and painting — Ornamental gardening — Sculpture — Music.

THERE appear to be reasonable grounds for the belief that what are justly considered in Europe as three of the most important inventions or discoveries of modern times, the art of printing, the composition of gunpowder, and the magnetic compass, had their first origin in China. However much we may have outstripped them in the use and application of these instruments or agents, the Chinese can urge claims to the priority of possession, which are sufficient to convince any unprejudiced person; and it seems fair to conclude that the knowledge and tradition of these contrivances travelled slowly westward through the channels of Oriental commerce, and were obscurely derived, by those who first imported them to Europe, by the way of Asia Minor or the Red Sea. There cannot be the least doubt of the art of printing having been practised in China during the tenth century of our era. The precise mode in which they operate is certainly different from ours; but the main principle, that of multiplying and cheapening books by saving the time and labour of transcription, is altogether the same.

Shortly previous to the commencement of the *Soong* dynasty, about the middle of the tenth century, a minister of state, named Foong-taou, is said to have introduced to the notice of government the art of taking impressions upon paper. History states that the first essay in printing was to transfer the pages from stone blocks, on which the writing had been engraved—a process by which the ground of the paper was black, and the letters white. This at length led to the improved invention of wooden stereotype blocks, on which the characters were cut in relief, as at present, and the effect thereby *reversed*, the paper page remaining white, and the characters being impressed in ink. Dugald Stewart, in his work on the 'Philosophy of the Human Mind,' considers the invention of printing "rather as the result of those general causes on which the progress of society seems to depend than as the mere effect of a fortunate accident;"—in fact, as a step in the social history of man, and as marking a particular point of his progress. Admitting this to be true, it would follow that the Chinese in the tenth century were not only further advanced than their contemporaries of Europe (of which there can be no doubt whatever), but that they had reached a higher point of civilization than the ancient Greeks and Romans.

The high estimation in which letters have ever been held in China may certainly be supposed to have contributed to the invention by which books are rendered available to the greatest number of readers; and it seems evident, from Chinese history, that as the period of Soong, which immediately followed, is celebrated for its writers, that invention gave an impetus to the national taste for its own peculiar learning. For all purposes of cheapness and expedition the method of printing is perfect; and a little consideration will show that the stereotype plan is

more peculiarly suited to the Chinese characters than to any other. The European alphabet consists of only a few letters, whose infinite combinations form many languages. With them, on the contrary, every *word* is a different character. The six-and-twenty letters of our alphabet are all within the reach of the compositor in setting up a page of type; and, from long practice, he moves his hands to the little cells in which they are arranged almost without looking; but in China it would require the combination of a Briareus with an Argus to pick out the hundreds, or rather thousands, of different characters in the printing of a single book. Then, again, the immense number of copies of their standard, or sacred, works, required in a population of hundreds of millions, all *reading*, if they do not *speak*, the same language, is another reason for stereotype.

But, on the other hand, there are some rare occasions on which particular reasons exist to make single or moveable types preferable, and on these occasions the Chinese use them. Mention has already been made of the Red Book, or Court Kalendar, containing the name and office of every functionary in the empire. A new edition of this is published every quarter; and as the characters which it contains are always pretty nearly the same, with only the difference of arrangement, this particular case approximates to that of our own alphabet; for which reason the Kalendar and some other works are printed with moveable types. For their general literature, the stereotype possesses another advantage; they can take off the impressions according to the sale of the work, and there is no needless expenditure of paper. When the faces of the letters are worn by use, they retouch them, and render them available for farther impressions; but, from the following account of their printing process, it will be remarked that there is not anything like the same pres-

sure, nor consequently the same wear and tear, as in our European printing. This, however, may be compensated by the greater durability of material in our metal type.

The substance commonly used by the Chinese is pear-tree wood, called by them *ly-mŏ*. The wooden plate or block, of a thickness calculated to give it sufficient strength, is finely planed and squared to the shape and dimensions of *two* pages. The surface is then rubbed over with a paste or size, occasionally made from boiled rice, which renders it quite smooth, and at the same time softens and otherwise prepares it for the reception of the characters. The future pages, which have been finely transcribed by a professional person on thin transparent paper, are delivered to the block-cutter, who, while the above-mentioned application is still wet, unites them to the block, so that they adhere; but in an *inverted* position, the thinness of the paper displaying the writing perfectly through the back. The paper being subsequently rubbed off, a clear impression in ink of the inverted writing remains on the wood. The workman then with his sharp graver cuts away with extraordinary neatness and despatch all that portion of the wooden surface which is not covered by the ink, leaving the characters in pretty high relief. Any slight error may be corrected, as in our woodcuts, by inserting small pieces of wood: but the process is upon the whole so cheap and expeditious that it is generally easier to replane the block and cut it again; for their mode of taking the impression renders the thickness of the block an immaterial point.*

Strictly speaking, "the press of China" would be a misnomer, as no press whatever is used in their printing.

* For ephemeral works, this block-printing is of course less adapted. A daily paper at Canton is imperfectly printed from a composition of the consistence of wax, in which characters can be more rapidly formed.

The paper, which is almost as thin and bibulous, or absorbent of ink, as what we call silver-paper, receives the impression with a gentle contact, while a harder pressure would break through it. The printer holds in his right hand two brushes, at the opposite extremities of the same handle; with one he inks the face of the characters, and, the paper being then laid on, he runs the dry brush over so as to make it take the impression. They do this with such expedition that one man can take off a couple of thousand copies in a day. The paper, being so thin and transparent, is printed on *one side* only, and each printed sheet (consisting of two pages) is folded back, so as to bring the blank sides in inward contact. The fold is thus on the *outer* edge of the book, and the sheets are stitched together at the other; which might lead an uninformed person to take any Chinese book for a new work, with its leaves still uncut. In folding the sheets the workman is guided by a black line, which directs him in the same manner that the holes, made by the points in our printed sheets, direct the binder.

Every Chinese volume is a species of *brochure*, neatly stitched with silk thread in a smooth paper of a drab colour, and every volume is numbered on the outer edges of the leaves. Collectors of choice books put up about ten volumes of the same work in a neat case, covered with flowered satin or silk. The popular works of the country are greatly cheaper than ours; they have no taxes on literature, and three or four volumes of any ordinary work, of the octavo size and shape, may be had for a sum equivalent to two shillings. A Canton bookseller's manuscript catalogue marked the price of the Four Books of Confucius, including the Commentary, at a sum rather under half-a-crown. The cheapness of their common literature is occasioned partly by the mode of printing, but

partly also by the low price of paper. What is called *India paper*, by our engravers and printsellers, is nothing but the large sheets in which the silk piece-goods of China are wrapped, as they are brought to us from Canton. These have commonly been purchased at an exorbitant price in London; but they might be bought by the chest, upon the spot, for much less than our own paper costs. There is, however, a considerable duty on the importation.

The date of the invention of paper seems to prove that some of the most important arts, connected with the progress of civilization, are not extremely ancient in China. In the time of Confucius they wrote on the finely-pared bark of the bamboo with a style; they next used silk and linen, which explains why the character *chy*, paper, is compounded of that for silk. It was not until A.D. 95 that paper was invented. The materials which they use in the manufacture are various. A coarse yellowish paper, used for wrapping parcels, is made from rice-straw.* The better kinds are composed of the *liber* or inner part of a species of *morus*, as well as of cotton, but principally of *bamboo;* and we may extract the description of the last from the 'Chinese Repository:'† "The stalks are cut near the ground, and then sorted into parcels according to the age, and tied up in small bundles. The younger the bamboo, the better is the quality of the paper which is made from it. The bundles are thrown into a reservoir of mud and water, and buried in the ooze for about a fortnight to soften them. They are then taken out, cut into pieces of a proper length, and put into mortars with a little water, to be pounded to a pulp with large wooden pestles. This semifluid mass, after being cleansed of the coarsest parts,

* They also obtain paper from the re-manufacture of what has been used, as well as from rags of silk and cotton.

† Vol. iii. p. 265.

is transferred to a great tub of water, and additions of the substance are made until the whole becomes of sufficient consistence to form paper. Then a workman takes up a sheet with a mould or frame of the proper dimensions, which is constructed of bamboo in small strips, made smooth and round like wire. The pulp is continually agitated by other hands, while one is taking up the sheets, which are then laid upon smooth tables to dry. According to others, the paper is dried by placing the newly made sheets upon a heated wall, and rubbing them with brushes until dry. This paper is unfit for writing on with liquid ink, and is of a yellowish colour. The Chinese size it by dipping the sheets into a solution of fish-glue and alum, either during or after the first process of making it.* The sheets are usually three feet and a half in length, and two in breadth. The fine paper used for letters is polished, after sizing, by rubbing it with smooth stones."

What is commonly known in this country under the name of Indian ink is nothing more than what the Chinese manufacture for their own writing. The writing apparatus consists of a square of this ink; a little black slab of schistus or slate,† polished smooth, with a depression at one end to hold water; a small brush, or pencil, of rabbit's hair inserted into a reed handle; and a bundle of paper. These four articles, the ink, the slab on which it is rubbed, the writing-pencil, and the paper, are called (with that respect which the Chinese profess for letters) "the four precious implements." They are taught from youth

* Sized paper is not required in their printing, where the ink is of a thicker consistency.

† This is found in the mountains called *Leu-shân*, on the west side of the Poyang lake, where the last embassy saw quantities of these slabs manufactured for sale.

to keep them in high order and neatness, and, as men's lasting impressions are always more or less the results of early habit, this of course has its effect.

The Chinese, or, as it is miscalled, *Indian*, ink has been erroneously supposed to consist of the secretion of a species of *sepia*, or cuttle-fish. It is, however, all manufactured from lamp-black and gluten, with the addition of a little musk to give it a more agreeable odour.* Père Contancin gave the following as a process for making the ink:—A number of lighted wicks are put into a vessel full of oil. Over this is hung a dome or funnel-shaped cover of iron, at such a distance as to receive the smoke. Being well coated with lamp-black, this is brushed off and collected upon paper. It is then well mixed in a mortar with a solution of gum or gluten, and, when reduced to the consistence of paste, it is put into little moulds, where it receives those shapes and impressions with which it comes to this country. It is occasionally manufactured in a great variety of forms and sizes, and stamped with ornamental devices, either plain, or in gold and various colours.

Besides being the universal ink of China, this manufacture serves occasionally with them, as it does with us, for drawings and designs, in executing which they use the same hair pencils with which they write. They consider that the best ink is produced from the burning of particular oils, but the commoner and cheaper kinds are obtained, it is said, from fir-wood. As almost every separate place is more noted than others for the manufacture or production of some particular article, the best ink is produced at Hoey-chow-foo, not far from Nanking; and a certain quantity annually manufactured for the use of the emperor and the court is called *Koong-mĕ*, "tribute-ink."

* A black dye, but not ink, is obtained from the cup of the acorn, which abounds in gallic acid.

The same name, however, is often given to any commodity, to imply its superiority over others of the same description, just as if the person who makes it were to call himself "Manufacturer to his Majesty." The best ink is that which is most intensely black, and most free from grittiness. Of the superior sorts a number of ornamented cakes are often tastefully disposed in small cases finely japanned and gilt; and, when their ink is very old, the Chinese sometimes apply it, as they do almost everything in its turn, in *medicine*.

However ancient may be the discovery, among this people, of the *composition* of gunpowder, its particular application to fire-arms was probably derived from the west.* The silence regarding cannon of the two elder Polos,† who served at the siege of Siang-yang-foo about the year 1273, and the circumstance of those persons having taught the use of balistæ for hurling stones to the Tartar emperor, seem to prove that the Chinese at that period were as little acquainted with fire-arms as Europeans. Their history notices the use of a composition of the nature of Greek fire, which, when thrown into the ditches that surrounded cities, exploded in contact with water, and proved very destructive. The invention of powder, as compounded of "sulphur, saltpetre, and *willow* charcoal," is carried very far back by the Chinese, and was probably applied by them to fireworks (in which they excel at present), or other harmless and useful purposes, long before their unwarlike spirit could have suggested the use of guns to themselves, or they could have borrowed the notion from Europeans.

It is reasonable to suppose that the early discovery of

* The Chinese name has no reference to guns, and simply means *fire-drug*.

† Marsden's edition, 4to. p. 488.

the composition of gunpowder was promoted by the abundance of *nitre*, a substance which abounds in the alluvial plains near Peking as much as it does in those of Bengal. Mr. Wilkinson, of London, in a lecture on the subject of gunpowder, has some observations deserving notice. He gives a table of the different quantities of nitre, charcoal, and sulphur, used by different nations in the manufacture, the proportions being expressed in 100 parts:—

	Nitre.	Charcoal.	Sulphur.	Total.
England . . .	75	15	10	100
France	75	15·5	9·5	100
Sweden	75	16	9	100
Russia	70	18·5	11·5	100
Austria	76	13	11	100
China	75·7	14·4	9·9	100

"The powder manufactured in England" (Mr. Wilkinson observes) "is preferred in commerce to that of other countries of Europe, as being much the strongest. It may therefore be inferred that our proportions are the best, though no doubt the excellence of the powder may partly depend on the purification and perfect admixture of the materials.* It is, however, worth observation, how nearly our proportions agree with those of the Chinese,† and, as they seldom change anything, it has probably been the same from the beginning; though, from the imperfection

* Dr. Watson, bishop of Llandaff, well skilled in chemical analysis, improved the strength of gunpowder by ridding the charcoal of pyroligneous acid.

† "The Honourable Colonel Napier, when in the ordnance department, procured a sample of powder from China, which, on the average analysis of 2 oz., was found to consist of 720 gr. saltpetre, 141 charcoal, 89 sulphur, and 10 loss. Dividing the deficiency equally, and reducing it to the proportion in 100 parts, gives the result in the above table."—*Lecture.*

of the mixture and the impurity of the materials, their powder may be inferior in strength to that produced in many other countries." That it is sometimes tolerably efficient was proved by the author of this seeing a seaman killed at his gun on board the 'Imogene' frigate by a shot which first came through the ship's side. It must be observed, however, that the ship was then within pistol-shot of the battery, and our subsequent war has proved the inferiority of their powder.

The Chinese, we may remark, have always acknowledged their great imperfection in gunnery. Before the Jesuits taught them to cast cannon, there is reason to suppose that they used tubes of wrought iron bound together by hoops, some of which were seen by Bell of Antermony. The last emperor of the *Ming* dynasty, as we have before observed, invited the assistance of some guns and artillerymen from the Portuguese of Macao against the Tartars; and *Kâng-hy*, after the conquest of China, employed Père Verbiest to superintend the casting of some hundreds of guns—a union of military pursuits with clerical which brought some scandal upon the enterprising father at Rome. One circumstance in the Chinese system must tend very much to the imperfection of their gunpowder. This munition of war seems, from the following extract of a Peking Gazette for 1824, to be prepared by the troops themselves as required: "The governor of Hoonân province has presented a report concerning the death of several persons by the explosion of gunpowder, as they were manufacturing the same in camp. While pounding the materials in a stone mortar, in the camp of the left division of the governor's troops, a spark which was struck ignited the whole quantity of powder, and the explosion killed five soldiers, together with six other persons." *

* Royal Asiat. Trans., vol. i. p. 395.

It remains to notice the claims of the Chinese to priority of invention in the case of the magnetic compass; and we may here refer to the sagacious investigations of Klaproth *sur l'invention de la Boussole*, in a letter addressed to M. de Humboldt.* The first distinct notice in Europe of the properties of the polarized needle appears in a satirical poem of Guyot de Provins, about the year 1190; and the next writer who refers to the same phenomenon is Cardinal de Vitry, who visited Palestine in the fourth crusade, and a second time subsequently at the beginning of the thirteenth century. He says distinctly, "*Adamas in India reperitur*;" and moreover adds, "*Acus ferrea, postquam adamantem contigerit, ad stellam septentrionalem, quæ velut axis firmamenti aliis vergentibus non movetur, semper convertitur; unde valde necessaria est navigantibus in mari.*" Subsequently to him, Brunetto Latini, author of a work in French called 'Le Trésor,' written about 1260, observes likewise that it was calculated to be highly useful at sea; but at the same time notices the ignorant prejudice by which navigators were deterred from its adoption; for, says he, "No master mariner dares to use it, lest he should fall under the supposition of being a magician; nor would even the sailors venture themselves out to sea under his command if he took with him an instrument which carries so great an appearance of being constructed under the influence of some infernal spirit." A more recent writer, the Jesuit Riccioli, states that "in the reign of St. Louis the French mariners commonly used the magnetic needle, which they kept swimming in a little vessel of water, and prevented from sinking by two tubes."

From the above authorities, and one or two others, M. Klaproth, with sufficient reason, infers that the use of the

* Date, 1834.

magnetic needle was known in Europe at the beginning of the thirteenth century; but none of those writers state that it was *invented* in Europe; they rather afford a presumption that the knowledge of it was obtained during the crusades. That the mariner's compass was in use likewise among the Arabs about the year 1242 is proved by a citation from Baylak, an Arabian writer, who mentions it as a contrivance generally known to navigators in the sea of Syria. M. Klaproth then proceeds to show that the Chinese compass was, about the year 1117, made exactly in the same manner as that seen by Baylak among the pilots of Syria. "It follows from all these facts (observes Klaproth), that this species of compass was used in China at least eighty years previous to the composition of Guyot de Provins' satire; that the Arabs possessed it nearly at the same time; and that, consequently, this invention was communicated, either directly or indirectly, to the Arabs by the Chinese, and that the Arabs transmitted it to the Franks during the early crusades." Gioia of Amalfi, who is commonly supposed to have discovered the use of the needle at the commencement of the thirteenth century, probably obtained it from some Eastern traders.

The attractive power of the loadstone has been known to the Chinese from remote antiquity, but its property of communicating polarity to iron is for the first time explicitly noticed in a Chinese dictionary finished in A.D. 121. Under the head of Loadstone appears this definition:— "A stone with which a direction can be given to the needle." Père Gaubil, in his history of the Tâng dynasty, states that he found, in a work written one hundred years later than the above, the use of the compass distinctly recorded. In a dictionary published in the reign of Kâng-hy (not the *imperial* work which goes by his name), it is stated that under the Tsin dynasty (previous to A.D.

419) ships were steered to the south by the magnet. But it was not with the compass alone that the Chinese were so early acquainted: M. Klaproth has shown that they had observed, long before us, the variation of the needle from the true pole.

The author of a Chinese work on medicine and natural history has the following passage:—"When a steel point is rubbed with the magnet, it acquires the property of pointing to the *south*; yet it declines always to the east, and is not due south. If the needle be passed through a wick (made of a rush) and placed on water, it will also indicate the south, but with a continual inclination towards the point *ping*, or ⅛ south." Klaproth then shows that such is actually the case at Peking, according to the observations of Père Amiot, who states, as the result of his own experiments during a number of years, that "the variation of the magnetic needle continues the same in this capital, viz. between 2° and 2° 30′ to the west." Now, as the Chinese suppose that the point of magnetic attraction is to the south, they of course reverse the foregoing terms, and say that the needle points *south*, with a variation *east*.

This very difference is a mark of the originality of the Chinese compass, which is farther proved (as Mr. Barrow observes) by their having engrafted upon, and combined with it, their most ancient astrological notions. From the numerous specimens in this country, it may be seen that this instrument, instead of consisting of a moveable card attached to the needle, is simply a needle of less than an inch in length, slung in a glazed hole in the centre of a solid wooden dish, finely varnished. The broad circumference of this dish is marked off into concentric circles, on which are inscribed the eight mystical figures of Fohy, the twelve horary characters, the ten others which, combined with

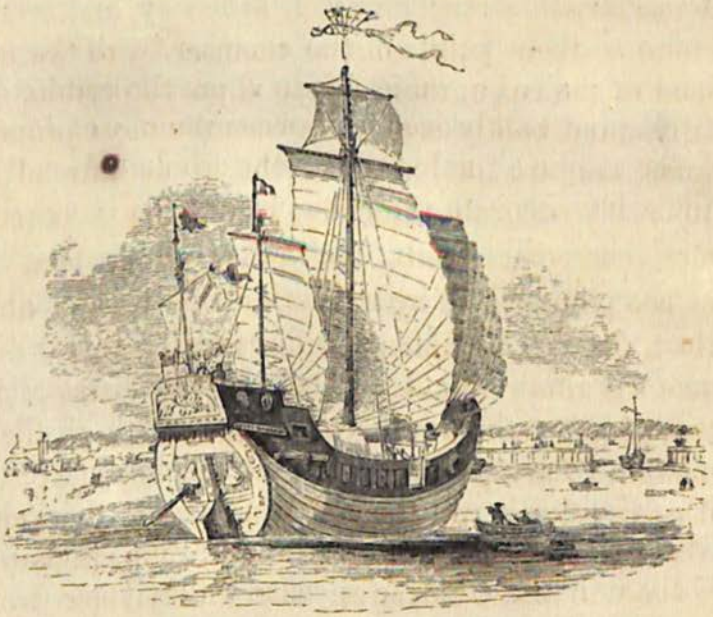
these, mark the years of the cycle, the twenty-four divisions of their solar year, the twenty-eight lunar mansions, &c.

The Chinese, however, appear to have applied the polarity of the magnet to a double purpose, and to have used it in ancient times as a guide on shore as well as at sea. This was effected by a machine called a *magnetic car*, in which was placed a little figure of a man turning on a point, and having its finger always directed to the same part of the horizon. A representation of the car is inserted in Klaproth's work, as copied from a Chinese encyclopædia. It is stated, in a history of the Tsin dynasty, that the figure placed upon the car represented "a genius in a feather dress," and that, when the emperor went out on state occasions, this car "always led the way, and served to distinguish the four points of the compass." These magnetic cars were also known in Japan about the middle of the seventh century, as is proved from the testimony of Japanese works; but they admit that the invention came from China.

But however ancient their knowledge of the compass, the art of navigation among the Chinese has rather retrograded than advanced in later times. It is clear that they once navigated as far as India, and their most distant voyages at present extend no farther than Java, and the Malay islands to the south. The principal obstacle to improvement consists in the unconquerable prejudice which forbids any alteration in the construction of their clumsy and unsafe junks. The hull of these in shape and appearance is not unlike a Chinese shoe, to which it is sometimes compared by themselves.* The stern is cleft, and as it were open, to admit the huge rudder, and thus shelter it

* The *eye* painted on the bows has a singularly exact parallel in the *eye of Osiris*, painted on those curious models of Egyptian vessels contained in Mr. Salt's collection of antiquities, sold in London, and many of which may be seen at the British Museum.

in some measure from the blows of the sea; but with the least stern-way on the vessel it seems calculated to prove fatal. In lieu of pitch, they caulk with a putty composed of burnt gypsum and oil,* mixed sometimes with bamboo shavings for oakum. Their flat unyielding sails of mat enable them to lie much nearer to the wind in light weather than our ships can do with canvas sails: but then, on the other hand, the flat bottom, without any keel whatever, occasions their falling fast to leeward, and gives the advantage altogether to our vessels. The clumsy anchors of the junks are made of a very heavy and hard wood, called by the Chinese *teih-mŏ*, "iron-wood," and they have only a single arm in some cases.



Trading Junk.

It has been objected to the accuracy of Marco Polo, that he mentions junks having *more* than one sail to a mast, on the ground that "Chinese vessels do not carry

* Extracted from the *Tung-shoo*, or Dryandra cordata.

any kind of topsail." The fact, however, is that they do very frequently, in light weather, and with the wind right aft, carry a topsail of canvas or cotton. These, with a view to holding as much wind, with as little perpendicular strain on the mast, as possible, are stretched to only about half the actual height of the sail; and they accordingly belly or bulge very much. It seems to have been proved, by the experiments of Mr. Edgeworth on the resistance of the air, that a curved surface of the *same* perpendicular height holds more wind than a flat one; or that the pressure of the wind is increased by augmenting the surface on which it acts. Admitting this to be the fact, it seems to be in favour of the sagacity of the Chinese in this particular instance.

As long as their junks confine themselves to the neighbourhood of the coast, their course is pretty certain. They generally stand boldly across between the most prominent headlands, and are guided along the whole line of coast by a tolerably accurate directory, in which are noted the harbours, currents, shoals, and other particulars. The courses are pointed out by means of the figures, already described, on the circumference of their compass. They can take no observations of the sun themselves; but it sometimes happens that a junk sailing as far as Batavia will engage a Portuguese of Macao, who is just able, with an old rusty sextant, to take an altitude of the sun and work out the latitude in a rough way. This, however, is never done in short voyages, where they steer by their compass without any chart, and judge of the distances by the last promontory or island in sight; a practice in which long experience makes them very ready.

Mr. Gutzlaff was passenger in one of these junks from Siam to the north of China, and has given a very full and interesting account of the voyage, as well as of the manage-

ment and internal economy of a Chinese trading-vessel. Besides perpetual offerings to an image of the "Queen of Heaven," whom we have before mentioned as the sailor's deity, they worship the compass itself. This is covered with a stripe of red cloth, some of which is also tied to the rudder and cable, the next objects of consequence to the sailors. Incense-sticks are burnt, and gilt paper, made into the form of a junk, is kindled before it. The compass likewise constitutes head-quarters on board. Near it some tobacco, a pipe, and a burning lamp are placed, and here the crew adjourn to enjoy themselves. In a dead calm, a quantity of gilt paper shaped like a junk is set adrift, and offerings made to the goddess and sundry demons: but if all this proves ineffectual, the offerings cease, and they await the result in patience.

The account which Mr. Gutzlaff gives of the manning and discipline of these trading-junks serves to explain in part the loss of so many at sea, when combined with the other imperfections attendant on their construction and management. They seem to be filled with the scum and off-scourings of the Chinese population—abandoned and desperate characters who have nothing to lose, and who cannot subsist on shore. Besides the principal owner of the cargo, or agent for those who own it, there is the captain or pilot. He sits constantly on the weather-side of the vessel, observing the shores and promontories as they are approached, and from habit seldom lies down to sleep. Though he has the nominal command over the sailors, these obey him or not, according to their pleasure; and sometimes scold or brave him like one of their own number. Next to the pilot is the helmsman, who manages the steering and sails. Besides clerks for the cargo, there is a purchaser of provisions, and another whose express business it is to attend to the offerings and to burn incense.

The crew consists of two classes: the able seamen, who are called *Tow-mŏ*, "heads and eyes;" and the ordinary seamen, or "comrades."

All these, with the exception of the last class, have sleeping-berths, just large enough to hold one person. Every one is a shareholder, with the privilege of putting a certain quantity of goods on board. The principal object of all is trade, and the working of the junk would seem to be a subordinate point. The crew exercise full control over the vessel, and oppose every measure which they deem injurious to their own interest; so that the captain and pilot are frequently obliged to submit to them. In time of danger the men often lose all courage; and their indecision, with the confusion that attends the absence of discipline, not unfrequently proves the destruction of the junk. Mr. Gutzlaff adds that, although they consider our mode of sailing as something better than their own,* they claim the superiority upon the whole for their native vessels, and would consider it as an imitation of barbarians to alter them. We are persuaded, however, that the risk of trouble and extortion on the part of the government is the chief obstacle to improvement in these respects. The Siamese have already adopted many things from our ships, and two *copper-bottomed* vessels came lately from Siam to Canton. On this very ground, the local government would not permit them to ascend the river much beyond Whampoa, the European anchorage.

* He was requested by the captain and others to explain the method of finding the latitude and longitude. When he had endeavoured to make them understand the theory, the captain wondered that he could bring (with the sextant) the sun on a level with the horizon; and insisted that by the *same process* he could "also tell the depth of water." But, being disappointed in this, which would have better suited his purpose, he exclaimed that observations "were entirely useless and truly barbarian!"

The ingenuity of the Chinese is best displayed in their arts and manufactures on shore, and in nothing more conspicuously than the ready and simple modes in which they contrive to abridge labour, and occasionally to avail themselves of a mechanical advantage, without any of the aids of scientific knowledge. "Chance" (says Dr. Abel) "led me to the shop of a blacksmith, the manufacturer of various iron instruments, from a sword to a hoe. This man well understood the modifying properties of heat, and took the fullest advantage of them in all the practical concerns of his business. He was forming a reaping-hook at the time of my visit. A large pair of shears, having one blade fixed in a heavy block of wood, and the other furnished with a long handle to serve as a lever, stood beside him. Bringing a piece of metal of the necessary dimensions from the forge at a white heat, he placed it between the blades of this instrument, and cut it into shape with equal ease and despatch."

In exemplification of the same point, we may quote another instance from the journal of Dr. Abel, who was a very intelligent observer. "A quantity of oil, recently taken from the mill (where it had been pressed), and contained in a wide shallow vessel, was continually agitated by a large copper pestle, with which a lad, for some particular purpose, gently struck its surface. The fatigue that would otherwise have arisen from the weight of the pestle, and uniform motion of the arm in using it, was prevented by the following very simple contrivance: a small bow of bamboo being fastened to the ceiling immediately over the vessel containing the oil, the pestle was attached to its string, and, thus suspended, it received from the slightest touch an adequate impulse, while the elasticity of the bow gave it the necessary recoil." In this manner it was worked by a young boy,

who otherwise would not have had strength to manage the pestle.

With regard to some of their industrious arts, it may be a question whether they are original and indigenous, or borrowed from India; though, with the known ingenuity of the Chinese, the presumption is in favour of the former. In cleaning cotton, they make use of a double process, in most respects similar to that known in India. The machine for freeing the cotton from its seed consists of two wooden cylinders, placed horizontally one above the other, and very nearly in contact. These are put in motion by a wheel and treadle, and the cotton, being applied to one side of the crevice, is turned over by the revolution of the cylinders or rollers to the opposite; while the seeds which are too large to enter between them fall to the ground. The cotton is then freed from knots and dirt by the same process as in Hindoostan. A very elastic bow with a tight string is held by the carder over a heap of cotton-wool. Pulling down the string with some force under a portion of the cotton, by means of a wooden instrument in his right hand, he suddenly allows the bow to recoil, and the vibration thus continually kept up scatters and loosens the cotton, separating it into fine white flocks, without breaking the fibre.

In some other instances, and indeed in most, no doubt can exist of the originality of invention; and the chief of these are the manufactures of *silk* and *porcelain*, which will presently be noticed. Their mode of making candles from the seed of the *croton sebiferum* is peculiar. This seed, which is contained in a three-lobed berry, is surrounded by a white substance not unlike tallow in consistence. It is first of all ground or crushed in an iron rut, which forms the arc of a circle, and in which a heavy wheel, suspended from a beam above, works back-

wards and forwards. When ground, it is heated over a fire to melt the vegetable grease, and then subjected to the press. The object is sometimes gained by boiling the

Cleaning Cotton.

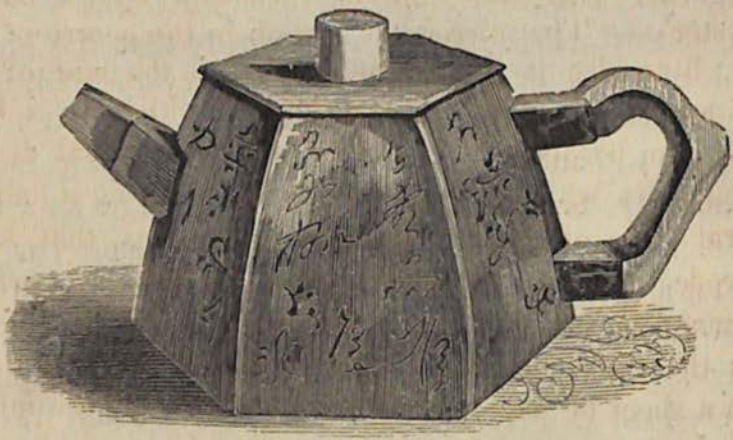
bruised seed in water, and skimming the grease from the top. As this substance easily melts, the candles made from it are coated on the outside with wax. They burn rapidly, having a large wick, and give a very bad light

with a great deal of smoke. The mode of procuring the oil from the berry of the *Camellia oleifera* is nearly the same as in the case of the croton. The seed is first crushed by pounding or grinding, and then put over the fire in bags, which are afterwards removed to the press. This oil is of a rather fine and delicate quality, and used in cookery, like olive-oil in the south of Europe.

In various branches of the manufacture of metals the Chinese possess considerable skill. They have the art of casting iron in very thin plates, and of repairing vessels thus constructed, by means of a small furnace and blow-pipe with which an itinerant workman goes his rounds. Their wrought-iron work is not so neat as our own, but extremely efficient. In point of cheapness, too, we excel them in this article; and it seems likely that if Chinese models of iron implements, and tools of every kind, were brought home and exactly imitated at Birmingham and Sheffield, without any attempts at improvement in the general shape or adaptation, they might become an article of commerce. As it is, the Chinese only import our iron in bars, and work it up themselves. A conformity to their own native models should guide the preparation of nearly all articles for the Chinese market. They will scarcely look at what has a foreign fashion about it, even though it should be better than their own; always excepting, of course, clocks and watches, of which they admit the utility, but which they have now begun to manufacture for themselves, importing the springs and some other portions of the works from England.

Their white copper, which has much of the appearance of silver, has a close grain, and takes a good polish. It is an alloy of copper, zinc, and iron, with a little silver, and occasionally some nickel. When in the state of ore, it is said to be powdered, mixed with charcoal-dust, and

placed in jars over a slow fire, the metal rising in the form of vapour in a distilling apparatus, and being afterwards condensed in water. It is sufficiently malleable to be converted into boxes, dishes, and various household utensils. The most singular application of this metal, however, is to the manufacture of certain teapots, which are formed in a very puzzling manner *over an earthen vessel* of the same shape, which appears as an interior lining. The handle and spout are commonly of the stone called *jade*, to which the Chinese give the name of *yu*. The outsides of these teapots are generally cut with inscriptions and devices on the metal, and a specimen of one is given below.



Metal Teapot, covering earthenware.

The highly sonorous nature of their *gongs* arises from the large proportion of tin in combination with copper. In the most considerable Budhist temples is always suspended a great cylindrical bell, which, however, is not rung like our bells, by swinging with a clapper, but struck on the outside with a large wooden mallet. The great bell of Peking, measured by one of the Jesuits, was fourteen feet and a half in height, and nearly thirteen

feet in diameter. This, as well as most others of the kind, is very ancient; and with such antique specimens we may include the vases and tripods of bronze and other metals, on which the Chinese place great store, but which are generally rather too clumsy to possess much elegance. Another of their antiques in metal is the circular mirror, the speculum of which is formed apparently of a mixture of copper and tin, with perhaps a portion of silver. Some of the round metal mirrors sold in Mr. Salt's collection of Egyptian antiquities, and now in the British Museum, are surprisingly like these.

But there is a puzzling property in many of the Chinese mirrors which deserves particular notice, and we may give it together with the solution furnished by Sir David Brewster:—"The mirror has a knob in the centre of the back, by which it can be held, and on the rest of the back are stamped in relief certain circles with a kind of Grecian border. Its polished surface has that degree of convexity which gives an image of the face half its natural size; and its remarkable property is, that, when you reflect the rays of the sun from the polished surface, the image of the ornamental border, and circles stamped upon the back, is seen distinctly reflected on the wall," or on a sheet of paper. "The metal of which the mirror is made appears to be what is called Chinese silver, a composition of tin and copper, like the metal for the specula of reflecting telescopes. The metal is very sonorous. The mirror has a rim (at the back) of about 1-4th or 1-6th of an inch broad, and the inner part, upon which the figures are stamped, is considerably thinner.

"Like all other conjurors (says Sir David Brewster), the artist has contrived to make the observer deceive himself. The stamped figures on the back are used for this purpose. The spectrum in the luminous area *is not an*

image of the figures on the back. The figures are a copy of the picture which the artist has *drawn on the face of the mirror*, and so concealed by polishing, that it is invisible in ordinary lights, and can be brought out only in the sun's rays. Let it be required, for example, to produce the dragon as exhibited by one of the Chinese mirrors. When the surface of the mirror is ready for polishing, the figure of the dragon may be delineated upon it in extremely shallow lines, or it may be eaten out by an acid much diluted, so as to remove the smallest possible portion of the metal. The surface must then be highly polished, not upon pitch, like glass and specula, because this would polish away the figure, but upon cloth, in the way that lenses are sometimes polished. In this way the sunk part of the shallow lines will be as highly polished as the rest, and the figure will only be visible in very strong lights, by reflecting the sun's rays from the metallic surface."

Metallic mirrors are now very much superseded among the Chinese by the use of glass ones. Their looking-glasses, however, being extremely thin, and the surfaces not ground and polished, like our plate-glass, are very imperfect. They are coated at the back, like ours, with an amalgam of mercury. The glass at Canton is partly obtained by remelting what is broken after it comes from Europe: but it is certain that the Chinese import our flints chiefly for the glass manufacture.*

The last embassy observed that there were no glass windows near Peking, the universal substitute being a strong semi-transparent paper which comes from Corea. The Chinese explain this by saying that no glass window has ever been found to be proof against such wide extremes of heat and cold as exist in the north of China.

* The materials are fused in a small reverberating furnace.

At Canton it has sometimes been found that an unusual change of temperature has broken the panes; but this must have arisen from the pressure of the half-seasoned and ill-constructed window-frames on the glass. In their table utensils the Chinese adhere to the use of porcelain in preference to glass or any other material.

In the ornamental processes of carving wood and ivory, and other substances, they greatly excel the rest of the world. Those ivory balls, containing sometimes as many as seven or eight others in the interior, have long excited the surprise of Europeans, and even led to the supposition that some deception must be exercised in joining the exterior balls after the others have been inserted. They are, however, really cut one within the other, by means of sharp crooked instruments working through the numerous round holes with which the balls are perforated, and which enable the workman to cut away the substance between, and thus to detach the balls from one another, after which the surfaces are carved. Their skill and industry are not less shown in cutting the hardest materials, as exemplified in their snuff-bottles of agate and rock crystal, which are hollowed into perfect bottles of about two inches in length, through openings in the neck not a quarter of an inch in diameter: but more than this, the crystal bottles are inscribed on the *inside* with minute characters so as to be read through the transparent substance.

The peculiar fashion of the Chinese tools in most cases proves their originality. Their carpenter's *saw* is formed of a very thin plate of steel, which for this reason is kept straight by a light frame of bamboo at the back, which serves at the same time as a handle.* In appearance this has a heavy and clumsy look, but the lightness of the

* This sort of saw has been very generally adopted in America.

bamboo prevents it being so in reality. Carpenters work their *awls* with a thong, whose two extremities are attached to the two ends of a stick. The thong being quite slack, a single turn of it is taken round the handle of the awl, which is then worked backwards and forwards with great velocity. Some of the articles of furniture made for the English at Canton could not often, in point of neatness, be surpassed in this country, and in respect to solidity are sometimes superior. The anvil of the Chinese blacksmith, instead of having a flat surface, is slightly convex or rounded. The iron that is worked upon it thus extends more easily under the hammer on all sides, but the metal probably loses something in solidity. The bellows consist of a hollow cylinder, the piston of which is so contrived that the blast shall be continuous.

But we have yet to say something of the two principal manufactures of China, those of *silk* and *porcelain*, the originality of which was never contested, as the introduction of both into Europe is perfectly well ascertained; and could the Chinese urge no other claims to praise on account of their ingenuity, these two alone might serve to give them a high rank among the nations of the world. D'Herbelot justly considers that, as Rome obtained the silk manufacture from Greece, and Greece from Persia, so the last was indebted for it, according to the best Oriental authors, to China. The tradition, indeed, of the invention is there carried back into the mythological periods, and dates with the origin of agriculture. These two pursuits or professions, namely, husbandry and the silk manufacture, the chief sources of food and clothing, form the subject of one of the sixteen discourses to the people which have been before noticed. It is there observed, that "from ancient times the Son of Heaven himself directed the plough: the Empress planted the

mulberry-tree. Thus have these exalted personages, not above the practice of labour and exertion, set an example to all under heaven, with a view to leading the millions of their subjects to attend to their essential interests."

In the work published by imperial authority, called 'Illustrations of Husbandry and Weaving,' there are numerous woodcuts, accompanied by letterpress explanatory of the different processes of farming and the silk manufacture. The former head is confined to the production of *rice*, the staple article of food, and proceeds from the first ploughing of the land to the packing of the grain; the latter details all the operations connected with planting the mulberry and gathering the leaves, up to the final weaving of the silk. Besides the common mulberry of China, which differs somewhat from that of Europe, they occasionally, in feeding the worms, have recourse to a wild specimen of the *morus* tribe, as well as to the leaves of another tree, supposed to be a variety of ash. The production of silk in the Chinese method, and with the aid of natives of the country, was tried experimentally by the East India Company at St. Helena; but has been abandoned, with the rest of their establishments on that island, since the expiration of the charter. The principal object, in the cultivation of the mulberry for feeding silkworms, is to produce the greatest quantity of young and healthy leaves without fruit. For this reason the trees are not allowed to exceed a certain age and height. They are planted at a convenient distance from each other, on the plan of a quincunx, and are said to be in perfection in about three years.

The mulberry-tree for silkworms is chiefly cultivated in Chĕ-keang, which province, together with the only three others that produce fine silk, namely, Keang-nân, Hoo-pĕ, and Sze-chuen, is crossed by the *thirtieth* parallel of lati-

tude. Chĕ-keang is a highly alluvial country, intersected by numerous rivers and canals, with a climate that corresponds pretty nearly to the same latitude in the United States of America. The soil is manured with mud, which is dug from the rivers, assisted with ashes or dung; and the spaces between the trees are generally filled with millet, pulse, or other articles of food. The time for pruning the young trees, so as to produce fine leafy shoots, is at the commencement of the year. About four eyes are left on every shoot, and care is taken that the branches are properly thinned, with a view to giving plenty of light and air to the leaves. In gathering these, they make use of steps, or a ladder with a prop, as the young trees cannot support a ladder, and would besides be injured in their branches by the use of one. The trees, with their foliage, are carefully watched, and the mischiefs of insects prevented by the use of various applications, among which are some essential oils.

The young trees of course suffer by being stripped of their leaves, which are the *lungs* of plants, and this is an additional reason for renewing them after a certain time. They endeavour in part to counteract the evil effect, by pruning and lopping the tree, so as to diminish the wood when the leaves have been stripped, and it is probable that a few leaves are left on. It is surprising, however, to observe how soon a tree in those climates will recover its leaves in the summer or autumn, after having been entirely stripped of them by a typhoon, or hurricane. Fresh plants are procured by cuttings or layers, or sometimes from seed. When the trees grow too old for the production of the finest leaves, and show a greater tendency to fruiting, they are either removed altogether, or cut and managed so as to produce fresh and young branches.

Mr. Barrow, who observed the management of the trees

and silkworms in Chĕ-keang, confirms the usual Chinese accounts, by saying that "the houses in which the worms are reared are placed generally in the centre of each plantation, in order that they may be removed as far as possible from every kind of noise; experience having taught them that a sudden shout, or the bark of a dog, is destructive of the young worms. A whole brood has sometimes perished by a thunder-storm." The chambers are so contrived as to admit of the use of artificial heat when necessary. Great care is taken of the sheets of paper on which the multitudes of eggs have been laid by the silkworm-moths; and the hatching of these eggs is either retarded or advanced, by the application of cold or heat according to circumstances, so as to time the simultaneous exit of the young worms exactly to the period when the tender spring leaves of the mulberry are most fit for their nourishment.

They proportion the food very exactly to the young worms by weighing the leaves, which in the first instance are cut, but afterwards, as the insects become larger, are given to them whole. The greatest precautions are observed in regulating the temperature of the apartments, and in keeping them clean, quiet, and free from smells. The worms are fed upon a species of small hurdles of basket-work, strewed with leaves, which are constantly shifted for the sake of cleanliness, the insects readily moving off to a fresh hurdle with new leaves, as the scent attracts them. In proportion to their growth, room is afforded to them by increasing the number of these hurdles, the worms of one being shifted to three, then to six, and so on until they reach their greatest size. The hurdles, as well as the rest of the apparatus, were sent from Canton to St. Helena for the use of the Company's establishment there. When the worms have cast their

several skins, reached their greatest size, and assumed a transparent yellowish colour, they are removed into places divided into compartments, preparatory to their spinning.

In the course of a week after the commencement of spinning, the silken cocoons are complete, and it now becomes necessary to take them in hand before the pupæ turn into *moths*, which would immediately bore their way out, and spoil the cocoons. When a certain number, therefore, have been laid aside for the sake of future eggs, the pupæ in the bulk of the cocoons are killed by being placed in jars under layers of salt and leaves, with a complete exclusion of air. They are subsequently placed in moderately warm water, which dissolves the glutinous substance that binds the silk together, and the filament is wound off upon reels. This is put up in bundles of a certain size and weight, and either becomes an article of merchandise under the name of "raw silk," or is subjected to the loom, and manufactured into various stuffs, for home or for foreign consumption. Notwithstanding the apparent simplicity of their looms, they will imitate exactly the newest and most elegant patterns from England or France. The Chinese particularly excel in the production of damasks and flowered satins. Their crape has never yet been perfectly imitated; and they make a species of *washing* silk, called at Canton *ponge*, which becomes more soft as it is longer used.

With regard to the *porcelain* of the Chinese, it is indisputably the original from which the similar manufactures of Europe were borrowed. The first porcelain-furnace on record was in Keang sy, the same province where it is now principally made, about the commencement of the seventh century of our era; but the famous furnaces of *King-tĕ-chin*, just to the eastward of the Poyang lake, were not established until about A.D. 1000. In the pro-

gress of the last embassy through the country, we observed that the largest quantities of porcelain were exhibited for sale at Nânchang-foo, just to the southward of the lake, from whence there is a water communication with *King-tĕ-chin*. The Chinese have a printed history of the furnaces at this place, contained in four volumes; but the main difficulty, in a translation, would be to identify the various substances, used in the manufacture, with the names by which they are distinguished in the original work. It is well known that the chief merit of the Chinese ware consists in its hardness, in the fineness of the fracture, and in the resistance which it offers to heat without cracking. The better kinds have never yet been surpassed in point of *substance;* but as regards the painting and gilding, they must yield to the productions of England and the continent.

The principal ingredients employed in the manufacture of the porcelain of China have been pretty well ascertained. It was soon discovered that the *Kao-lin*, mentioned by Père Dentrecolles in Du Halde, was the felspar clay, or porcelain earth of Europe. The neighbourhood of the Poyang lake was observed, by our embassies, to abound in those disintegrating granite rocks which supply the largest quantity of that material. The detailed account of the manufacture by Dentrecolles was calculated to convey little information regarding the real substances used by the Chinese; but some specimens of the various materials, which were subsequently sent to France from China, enabled our neighbours to imitate the ware, and establish the commencement of the manufacture. It has been satisfactorily shown by Marsden, that the word porcelain, or *porcellana*, was applied by the Europeans to the ware of China, from the resemblance of its fine polished surface to that of the univalve shell so named; while the

shell itself derived its appellation from the curved or gibbous shape of its upper surface, which was thought to resemble the raised back of a *porcella*, or little hog.*

Silica and alumine, or flint and clay, being the principal constituents of all chinaware, the *Kao-lin* of Dentrecolles is the clay, and the *pĕ-tun-tse* is the silica. The following facts are pretty well ascertained from the Chinese. They state that Kao-lin, or, more correctly, *Kaou-ling*, which means "lofty ridge" (probably where the granite is most exposed to disintegration), is mixed with small shining particles, meaning the *mica*, with which it naturally abounds. Of the *pĕ-tun-tse*, they observe that it is white, hard, and with a smooth surface. The former material is said to require less labour than the latter, or, in other words, it is a soft clay, while the latter is a very hard and stony substance. The Kaou-ling is dug from the mountain, "wherever the outer surface of the earth is of a reddish colour, and abounds with shining particles." The *pĕ-tun-tse* is pounded with difficulty in mortars, the pestles of which are worked by a stream, and the powder being reduced to a fine paste by mixture with water, it is made up into cakes fit for use, and sold to the manufacturers. The Chinese say that the former material derives strength from the latter, which is obtained from the hardest rocks. Another substance used by them is *hua-shĕ*, "slippery stone," which is steatite or soapstone; and a fourth is *shĕ-kaou*, alabaster or gypsum, which they say is used in the painting process after it is burnt. On approaching the neighbourhood of *King-tĕ-chin* from the eastward, the late Sir George Staunton observed several excavations, made in extracting from the sides of the adjoining hills the *pĕ-tun-tse*. He says it was a species of fine granite, in which the *quartz* (or silica) *bore the largest proportion*.

* Marco Polo, p. 428, Note.

He afterwards remarked some quarries, out of which were dug stones beautifully white and shining; they consisted, he says, of *quartz in its purest state.* There can be no doubt, therefore, respecting the two principal ingredients of Chinese porcelain. It would seem that Kaou-ling is the "growan clay," and *pĕ-tun-tse* the "growan stone" of Cornwall; and the granite mountains by which the Poyang lake is surrounded afford an abundance of both those materials. There is another manufactory at *Chaou-king-foo*, to the west of Canton, which supplies the limited demand of the European and Indian trade; but it is greatly inferior in reputation to King-tĕ-chin.

The vitreous glaze of Chinese porcelain is obtained by the union of the pounded *pĕ-tun-tse*, or silica, with the ashes of fern, abounding on the same steep hills that afford the other materials. The glassy combination of flint and alkali, called by chemists a *silicate*, is well known to give to porcelain its polished surface. The Chinese call this "varnish" or "oil," with an allusion to their lackered or japanned ware. In proof of the difficulty of acquiring any real information from the descriptions of Dentrecolles, we may quote his odd observation, that "this oil or varnish is got from a very hard stone, which is not very surprising, since it is stated that stones are formed of the *salts* and *oils* of the earth." This was written more than a hundred years since, and seems to mean the combination of the powdered quartz with the alkali in the formation of the glaze.

In the third part of Dr. Morrison's Dictionary, under the head of "porcelain," are some extracts from the history of the furnaces at King-tĕ-chin. It is observed that *Kaou-ling* is the name of a hill on the east side of the place of manufacture, and that the earth procured from thence was the property of four different families, whose names were

therefore stamped on the cakes of the material. The best *pĕ-tun-tse* is obtained near *Hoey-chow*, in the adjoining province of Keang-nân. It is pounded with pestles, which are worked by means of cogged wheels, turned by a mountain stream. After pounding the stone, they reduce it to a nearly impalpable powder by suspension, and subsequent settlement, in water; after which they mould it into bricks and sell it to the people at the potteries. The government of China, for more than a thousand years past, has paid much attention to the manufacture of porcelain, and especially to that at *King-tĕ-chin*, which pertains to the chief city Jaou-chow-foo. The emperor Kien-loong sent a person from Peking to make drawings of the whole process in its details.

In a voluminous Chinese work, the subjects of these drawings, which were twenty in number, are described at length. They commence with the process of procuring the materials and making the paste. Then is represented the business of preparing the ashes for the glazing, and mixing them with the silica, so as to form a thickish liquid. Earthen cases are provided in which to bake the ware, the round portions of which are turned on a lathe, and the others made in a mould. The subject of another picture is the selection of the "blue material," which is supposed to be cobalt. After being turned on a lathe, or formed by a mould, the unburnt *biscuit* (as workmen call it) is finished by smoothing and paring off all inequalities by the hand, the bits taken off being pounded and worked to a milky consistence, to be used by the painters. In painting the ware, one set of people design the outline, and another fill in the colours; and the Chinese say that this division of labour is to "concentrate the workman's hand, and not divide his mind." It is said that, previous to baking, the same specimen of ware passes through twenty hands, and

that, before being sold, it has gone through more than double that number. The pictures proceed to represent the baking of the ware in open and in close furnaces, and, when it is completed, the process of binding it with straw, and packing it in tubs for sale.

The whole series of drawings concludes with the ceremony of sacrificing and giving thanks to the god of the furnaces; and this god, according to Dentrecolles, owed his origin to the difficulties encountered by the workmen in executing some orders from Peking, on account of the emperor. Several models were sent from thence, of a shape and size which defied all the efforts of the people to imitate them; and, though representations were made to that effect, these served only to increase his majesty's desire to possess the specimens required. With a view to meet the emperor's inclination, much money and labour were spent, and both rewards and punishments held out to the people employed, but all in vain; when one of the workmen, reduced to despair by the result of his unavailing efforts, threw himself into the red-hot furnace, and was instantly consumed. The story says that the specimens then baking came out perfectly fine and conformable to the model, and from that time hence the unfortunate victim passed for a divinity, becoming the god of the furnaces.

In connexion with the subject of their porcelain it remains to mention a curious discovery lately made in Egypt. In a note to an article of the 'Quarterly Review' on *Egypt and Thebes*,* it is remarked,—"Signor Rosellini showed the other day to a friend of ours at Florence a sort of smelling-bottle, evidently of *Chinese porcelain*, and with characters to all appearance Chinese! This was found by Rosellini himself in a tomb which, as far as could be ascertained, had not been opened since the days

* No. CV., February, 1835.

of the Pharaohs." Three of the same little bottles, which were also discovered in Egypt, and brought home by Lord Prudhoe and by Sir G. Wilkinson, have been examined by the writer of these pages, who can vouch for their being *identical* in shape and appearance (though not in the fineness of the porcelain) with the best smelling and snuff-bottles manufactured at this day by the Chinese. It so happened that he had in his possession a real Chinese bottle of recent manufacture, and it corresponded so closely in size and shape with the bottles found in the Egyptian tombs, that he presented it to the owner of two of them, that it might be associated with its supposed ancient likenesses. The following is the substance of the information relating to the puzzling bottles from Egypt.

In journeying up the Nile, looking out for antiquities, the travellers stopped at Coptos. A Fellah offered for sale two bottles nearly alike in inscription, and of the same form. They were both purchased, and with them a fragment of a statue without an inscription, but which in workmanship was of the later dynasties. At Coptos are temples of the earlier dynasties (Thothmes III., who probably reigned about Joseph's time), down as late as the Roman Cæsars; but all the antiquities of smaller dimensions there purchased appear to have been of the later Egyptian dynasties—say about the time of Psammeticus. Sir G. Wilkinson gave one of these bottles to the British Museum; another, in the possession of Mr. Pettigrew, was kindly furnished to the author, that a fac-simile might be prepared for this work.

The size is identical with the original. The whole, with the exception of the two *white sides*, is of a light-green colour, similar to that with which the Chinese frequently paint the ground of their porcelain vessels; often the *insides* of them. The sketch of some vegetable pro-

duction is slightly executed on one side of the bottle; the stalk and leaves have the appearance of a drawing in Indian ink, being of a pale watery black, and the flower is

Porcelain Bottle, from Egyptian Tombs.

of light red. The style of this slight sketch is precisely Chinese. On the reverse side are five characters—*ming*, *yue*, *soong*, *choong*, *chaou*, being a line of five words taken from a poem, and having this meaning: "the bright moon shines amidst the firs." The interior of the bottle contained a small quantity of a black and nearly impalpable powder, which had a carbonized appearance, stated by Sir G. Wilkinson to be the collyrium with which the Egyptian women stained their eyelids. This strange relic, had it been met with in China, would have excited little notice, being so like other bottles of the same shape and size actually in use; but its ascertained discovery in an *Egyptian tomb* is a matter for speculation.

The statement of Signor Rosellini, that he himself

opened the tomb in which he found one of the bottles, is very circumstantial; but the tomb may have been opened before. The characters on the bottles are not only of a modern shape, but the scraps of poetry have been recognized by the Chinese themselves as the productions of a person who lived at a comparatively late period.

The *lackered* or varnished ware of the Chinese, though by their own admission inferior to that of Japan, is occasionally, in the hands of the best workmen, a beautiful manufacture. It varies, however, from the polished jetty surface of the magnificent folding-screens, sometimes brought home to this country, down to the articles of daily use made for the Chinese themselves, in the shape of tubs, trays, and wash-hand basins, with the ornamental parts of their buildings. These coarser varieties are derived from the nuts or seeds of the Dryandra cordata, while the finer kind is obtained from the gum of a species of Rhus. The chief expense of the manufacture arises from the care with which the consistence of the varnish must be regulated in laying it on, and the number of repetitions required in the finer kinds of ware, of which each successive coat must be allowed a considerable time to dry before it is again touched. When first introduced to Europe, this manufacture was highly appreciated, and the export from Canton considerable; but the improvements in our own productions have reduced the quantity now in demand to something very small.

The native ingenuity of the Chinese, to which themselves and the rest of the world have apparently been indebted for so many important and useful inventions, has been recorded by the late Sir George Staunton, on occasions when their efforts were required by the embassy. "Two of them (says he) took down the two magnificent glass lustres sent as presents to the emperor, in order to

place them in a more advantageous position. They separated them piece by piece, and put them again together in a short time without difficulty or mistake, the whole consisting of many thousand minute pieces, though they had never seen anything of the kind before. Another Chinese cut a narrow slip from the edge of a curved plate of glass, in order to supply the place of one belonging to the dome of the Planetarium, which had been broken in the carriage. The English mechanics belonging to the embassy had in vain attempted to cut the glass according to this curved line, with the assistance of a diamond. The native workman did not show his method; but it was said that he succeeded by first drawing the point of a heated iron across the surface to be divided." *

As relates to the fine arts, or those which minister rather to the pleasures than to the wants of mankind, it becomes necessary to make some allowances for the peculiarities of national taste, which has generally been admitted to be the most conventional and capricious thing in the world, being determined by the infinite varieties of national character, models, and associations. The arts of drawing and painting do not rank so high among the Chinese as among ourselves in Europe, and, having therefore met with less encouragement, they may be expected to have made less progress. In works that do not require a scientific adherence to the rules of perspective they are sometimes very successful. They paint insects, birds, fruits, and flowers, very beautifully, and nothing can exceed the splendour and variety of their colours. Native artists have often been employed at Canton and Macao, by English naturalists, in delineating various specimens in botany and zoology; and under proper direction they

* Embassy, vol. ii. p. 288.

have been found capable of giving a correct and scientific representation of the various objects, as well as a brilliant and well-coloured drawing. One thing in our European art they do not fully enter into, which is *shading;* and they positively object to the introduction of shadows in painting. Mr. Barrow states, "When several portraits by the best European artists, intended as presents for the emperor, were exposed to view, the mandarins, observing the variety of tints occasioned by the light and shade, asked whether the originals had the right and left sides of the figure of different colours? They considered the shadow of the nose as a great imperfection in the figure, and some supposed it to have been placed there *by accident.*"

Though the Chinese certainly do not practise the art of perspective in its correctness, or according to any regular rules, it would be a mistake to suppose that it is always entirely neglected. Their artists, at Canton at least, have taken hints from European performances in this respect, and their drawings by the eye are often tolerably correct as to perspective, though light and shade are still neglected. The woodcuts in Chinese books are generally executed almost entirely in outline, which is occasionally very spirited as well as faithful. The drawings which they chiefly value among themselves are in water-colours and Indian ink, sketched in a very slight manner upon either fine paper or silk. A favourite subject with them is the bamboo, which is represented in all the different stages of its growth, from the tender shoot, just appearing above the earth (when they use it for food, as we do asparagus), up to the period of its producing its grass-like flowers and seeds.

In connexion with drawing and the imitative arts, we may observe that the Chinese style of ornamental garden-

ing, and of laying out pleasure-grounds, has been very much overdrawn by Sir William Chambers, in an essay on that subject, which may be considered quite as a work of imagination in itself. Mr. Barrow, however, who resided for a considerable time at *Yuen-ming-yuen*, "the garden of perpetual brightness," which is an extensive pleasure-ground of the emperor, lying north-west of Peking, and greatly exceeding Richmond Park in extent, has given a favourable account of their taste in this department of the arts. "The grand and agreeable parts of nature (he observes) were separated, connected, or arranged in so judicious a manner as to compose one whole, in which there was no inconsistency or unmeaning jumble of objects, but such an order and proportion as generally prevail in scenes entirely natural. No round or oval, square or oblong lawns, with the grass shorn off close to the roots, were to be found anywhere in those grounds. The Chinese are particularly expert in magnifying the real dimensions of a piece of land, by a proper disposition of the objects intended to embellish its surface. For this purpose tall and luxuriant trees of the deepest green were planted in the foreground, from whence the view was to be taken; whilst those in the distance gradually diminished in size and depth of colouring; and in general the ground was terminated by broken and irregular clumps of trees, whose foliage was varied, as well by the different species of trees in the group, as by the different times of the year in which they were in vigour; and oftentimes the vegetation was apparently old and stunted, making with difficulty its way through the clefts of rocks, either originally found, or designedly collected upon the spot.

"The effect of intricacy and concealment seemed also to be well understood by the Chinese. At Yuen-ming-

yuen a slight wall was made to convey the idea of a magnificent building, when seen at a certain distance through the branches of a thicket. Sheets of made water, instead of being surrounded by sloping banks, like the glacis of a fortification, were occasionally hemmed in by artificial rocks, seemingly indigenous to the soil. The only circumstance which militated against the picturesque in the landscape of the Chinese was the formal shape and glaring colouring of their buildings. Their undulating roofs are, however, an exception to the first part of the charge, and their projection throws a softening shadow upon the supporting colonnade. Some of those high towers which Europeans call pagodas are well-adapted objects for vistas, and are accordingly for the most part placed on elevated situations."

In sculpture, understood as the art of cutting stone into imitative forms of living objects, the Chinese are extremely defective. Their backwardness in this, as well as in other branches of the fine arts, has been justly ascribed to the little communication they have had with other nations, and the want of encouragement at home, founded on the policy and practice of discountenancing *luxury* and promoting *labour*, particularly that which is employed in producing food for man. Their sculptured figures in stone are altogether uncouth in form and proportion; but their deficiency in this respect is in some degree made up by a very considerable share of skill in *modelling* with soft materials. For this reason it is that their gods are never represented in stone, but in modelled clay. No great anatomical skill is called for on these occasions, as the figures are always pretty fully clothed, and exhibit no such specimens of nudity as abound in the Grecian Pantheon. Still the drapery is generally executed with remarkable truth and effect, and this feature often drew the

attention of those who composed our embassies, in their visits to the various temples which occurred on the route.

It remains only to say a few words relative to the Chinese art of music. On this point Mr. Hüttner, who was attached to Lord Macartney's mission, considered that "their gamut was such as Europeans would call imperfect, their keys being inconsistent, that is, wandering from flats to sharps, and inversely, except when directed by a bell struck to sound the proper notes. The Chinese, in playing on instruments, discovered no knowledge of semitones, nor did they seem to have any idea of counterpoint, or parts in music. There was always one melody, however great the number of performers; though, in a few instances, some of the instruments played in the lower octave, while the rest continued in the upper, and thus approached to harmony." Their instruments are mostly tuned in unison, and they have little or no idea of accompaniments. The antiquity of music in China is proved by its being frequently mentioned by Confucius himself, and the encouragement which he gives to its cultivation might have been expected, in the course of time, to produce something better than the imperfect art which now exists there. They have certain characters to express the name of every note in their very limited scale. These they use in writing down their airs; but whether this mode of notation is indigenous, or whether they obtained it from the Jesuits, is doubtful. It is indeed stated that the Emperor Kâng-hy was much surprised when P. Pereira pricked down the Chinese tunes as they were played, and repeated them afterwards.

Their instruments are very numerous, consisting of different species of lutes and guitars; several flutes and other wind instruments; a squeaking fiddle with three strings; a sort of harmonicon of wires, touched with two slender

slips of bamboo; systems of bells and pieces of sonorous metal; and drums covered with snake-skin. In lieu of catgut, they string their instruments with silk and wire. Many of the Chinese have a ready ear for music, though accompanied by such a bad national taste. The magistrate of the Macao district was on a visit to the writer of this, when, the piano being touched with a Chinese air, called *Mooleehwa*, of which the music is given in Barrow's Travels, he immediately turned with a look of pleased surprise, and named the tune.

Among the Chinese instruments we must not forget to mention one which emits, as nearly as possible, the tones of the Scottish bagpipe, without the buzzing sound that is produced by the *drone* of the latter. The melody of the Chinese and Caledonian pipes is so exactly similar, that it has never failed to excite the attention of the Scotch who have visited China; and indeed the recognition has been mutual, for when a Highland piper (who had been taken out in an Indiaman) was sent up to Canton to attend a meeting of the sons of St. Andrew on the national anniversary, the Chinese were no less struck with the picturesque costume of the plaided Gael, than ravished by the strains which proceeded from his instrument. It may be hoped that, in this respect, they evinced a more correct taste than was displayed by one of the sailors on board the same ship with the Highlander. It was on some occasion when the latter, with pistol and dirk at his side, was parading the deck with his pipes, that the unlucky Jack, tempted by the mere spirit of mischief, or willing to lower the *inflation* of his Scottish shipmate, snatched up a young pig, and, placing it between his right arm and his side, squeezed the poor animal until it emitted sounds as loud at least, if not as musical, as those of the instrument which it thus unconsciously burlesqued.

The action was so irresistibly comic that shouts of laughter echoed through the ship; and the piper would have been provoked to take summary vengeance on the author of the jest, had he not been prevented by the interference of the bystanders.

CHAPTER XX.

SCIENCES.

Three divisions of human knowledge — Contempt for abstract science — Optics — Union of astrology with medicine — Scheme of physics — Practice of medicine — Ignorance of native doctors — Small-pox and vaccination — Chemistry — Cooking by steam — Distillation — Dispensaries — Science of numbers — Geography — Astronomy — Lunar year and cycle — Almanac — Mechanics and machinery — Architecture — The arch.

THE Chinese profess to make a general distribution of human knowledge under the three heads of "Heaven, Earth, and Man," and this may appear to some readers not altogether unlike the three-fold division proposed by Lord Bacon, of "God, Nature, and Man." A well-known encyclopædia, in sixty-four volumes, called *San-tsae-too-hoey*, which dates about the end of the sixteenth century, consists of woodcuts, illustrated by letterpress, in the three departments above stated. This work, however, having been the compilation of one person only, and consisting chiefly of plates, is superficial even for the Chinese, and does not contain a full account of their science, such as it is. The character of the book may be partly gathered from the following account of its contents and method of arrangement. Under the head of *Heaven*, of course comes astronomy, and this includes something of what was learned from the Arabians and Europeans. The department of *Earth* includes principally their imperfect notions of geography. The third division, that of *Man*, is by far the most copious. It contains representations of persons

famous in history, and of different tribes of men. Then is introduced the subject of the Chinese cycle (which rather belongs to the first department), and of the numerical combinations of Fo-hy. Next come buildings; furniture; implements used in husbandry, manufactures, and the arts of peace; arms and warlike weapons; woodcuts in anatomy; costumes; games of skill; specimens of ancient inscriptions; botany and natural history, as applicable to medicine; active sports and exercises; specimens of coins and money.

The actual state of the sciences in China may perhaps be ranked with their condition in Europe some time previous to the adoption of the inductive method in philosophy. The constitutional ingenuity and industry of the people has led them to fall upon various practical results, in spite, as it would seem, of a feature in their character and habits which is opposed to the progress of knowledge. They profess to set no value on *abstract* science, apart from some obvious and immediate end of utility. Among ourselves, the practical *application* of scientific discoveries is sometimes long subsequent to the discoveries themselves, which might perhaps never have been made, had not science been followed up through its by paths for its own sake merely, or with a very remote view to utility in practice. The Chinese always estimate such matters by their immediate and apparent *cui bono*. Dr. Abel relates, that, after satisfying a mandarin in reply to his questions concerning some of our useful manufactures, he took occasion to mention that we had metals which on coming in contact with water burst into flame. "I had some potassium with me (he adds), and was desirous of showing its properties to him. He immediately inquired concerning its *uses*, and, when these could not be very satisfactorily explained to him, looked too contemptuously to induce me to venture

an experiment." And yet this discovery of the metallic base of *potash* was one result of the investigations of Sir Humphry Davy, whose practical applications of his scientific discoveries to useful and beneficial purposes were of such inestimable value and importance.

A surprising enumeration might be made of instances in which the Chinese appear to have stumbled by mere chance upon useful inventions, without the previous possession of any scientific clue. Cases, however, occur in which it may be fairly suspected that they were indebted to the European missionaries. Without knowing anything, for instance, of that theory of optics which treats of the convergence and divergence of rays of light by lenses of different shapes, they use both convex and concave glasses, or rather crystals, to assist their sight. We noticed in the last chapter that they possess glass in a very coarse and inferior state, and that at Canton they sometimes melt down broken glass from Europe. In spectacles, however, the want is supplied, all over the empire, by the use of rock crystal. This is ground with the powder of corundum; and if anything could prove the Chinese spectacles to be original inventions, or not borrowed from Europe, it would be their very singular size and shape, as well as the strange way of putting them on. The annexed cut represents a pair of these primitive optics, slung over the ears with silken strings and weights, and imparting by their immense size a most sapient appearance to the wearer.

For checking the glare of the sun, they make use of a mineral which they call *Cha-shĕ*, or "tea-stone," from the resemblance of its transparent hue to a weak infusion of black tea. This, in all probability, is a smoky quartz, or silex, allied to the *cairngorum* of Scotland. In some instances the Chinese have been known to attempt slavish

Spectacles.

copies of European telescopes; but a little science became requisite in the construction of instruments consisting of compound lenses, and they accordingly failed. When, however, a few specimens of Sir David Brewster's optical toy, the kaleidoscope, first reached Canton, these were easily imitated. The Chinese became exceedingly taken with them; vast numbers were immediately manufactured on the spot, and sent up the country, under the appropriate name of *Wân-huâ-tung*, or "tubes of ten thousand flowers."

The jargon employed in their pseudo-science, and the singular resemblance which this bears to the condition of physical knowledge, not very long ago, even in our own country, is deserving of some remark. It is pretty generally known that, within a comparatively recent period of our history, the sciences of medicine and astrology were very gravely combined. A rather handsome monument in Mortlake churchyard, dated as late as 1715, bears a Latin inscription to the memory of "John Partridge, Astrologer and Doctor of Medicine, who made physic for

two kings and one queen, to wit, Charles II., William III., and Queen Mary." It was the deplorable condition of the healing art about or a little before that period, in France, also, that exposed it to the unmerciful ridicule of Molière. It is likely that most readers may not have fallen in with a thick quarto volume, dated 1647, and entitled 'A modest Treatise of Astrologie, by William Lilly.'* The work is dedicated to Bolstrod Whitlock, Esq., Member of Parliament, and among other matter contains "Astrologicall aphorisms beneficiall for Physicians;"—as, "He that first enters upon a cure in the hour of Mars shall find his patient disaffected to him, and partly disdain and reject his medicines, his pains ill-rewarded, and his person slighted." In the same work are expounded the supposed connexions between the several planets and the parts of the body: "He will be infinitely oppressed (says this learned Theban) who in the hour of Mars shall first get an *hot* disease, and in the hour of Saturne a *cold* one;"—"When Jupiter is author of the sicknesse, he demonstrates ill-affection of the liver;"—"Mars being the cause of a feaver, and in Leo, shows ebolition or a boyling of the humours, continuall burning feavers, whose originall cause springs from the great veines near the *heart*."†

* The person ridiculed by Butler under the name of Sidrophel, who is made to defend his art in the following convincing manner:—

"Is it not ominous in all countries
When crows and ravens croak upon trees?
The Roman senate, when within
The city walls an owl was seen,
Did cause their clergy, with lustrations,
(By 'r synod call'd humiliations,)
The round-fac'd prodigy t' avert
From doing town and country hurt:
And if an *owl* have so much power,
Why should not *planets* have much more?" &c.

† They have also some vague notions of the humoral pathology, long since exploded in this country, but alluded to in the above ex-

Compare this with the following scheme of Chinese physics, on which are based all their medical as well as other theories, and in which will be perceived precisely the same relations as those noticed in the foregoing quotations from Lilly.

CHINESE SCHEME OF PHYSICS.

Five Planets.	Five Viscera.	Five Elements.	Five Colours.	Five Tastes.
Saturn	Stomach	Earth	Yellow	Sweet
Jupiter	Liver	Wood	Green	Sour
Mars	Heart	Fire	Red	Bitter
Venus	Lungs	Metal	White	Pungent
Mercury	Kidneys	Water	Black	Salt

In treating of the planets and their significations, "Saturne (quoth Lilly) is cold and dry, melancholic, *earthly;*" "Jupiter governeth all infirmities in the *liver*; of colours, sea-green or blew, a mixt yellow or *green;*" "Mars, in nature hot and dry, he delighteth in *red* colour, and in those savours which are *bitter*, sharp, and burn the tongue;" "Venus, in colours she signifieth *white;*" "Mercury, in the elements he is the *water.*" The several relations are here identical, and all this looks very much as if the philosophy of our forefathers had been derived intermediately from China. It is this easy plan of *systematizing without experiment* that has kept the latter country in the dark, and infested every department of its physical knowledge; while the inductive philosophy recommended in the *Novum Organon* of Bacon has done such wonders in Europe. As a specimen of Chinese reasoning, nothing can well be

tracts. "They talk (as Dr. Abel correctly states) of ulcers being outlets to noxious matter, and divide diseases and remedies into two classes, *hot* and *cold*, depending greatly on purgatives for driving out the heat of the body."

imagined more silly than the following:—"The upper half of the body partakes of the *Yâng*, and the nature of the heaven, and the medicines suited to that part of the body are the heads of plants; the body of the plant is for diseases of the middle," &c.

And yet, when they condescend to abandon their theories, and to be guided by observation and common sense, they can occasionally talk very differently. Dentrecolles translated a medical treatise composed by a Chinese practitioner, and called *Châng-seng*, or "long life," being in fact an essay on diet and regimen. This, as it proceeds entirely on the personal experience of the individual, really contains something that is both true and useful.* Among us, such a work might be arranged under the four heads of Air, Exercise, Diet, and the Passions. Our Chinese author has likewise chosen four heads, but calls them "the Passions, Diet, the Actions of the Day, and the Rest at Night," comprising, however, much that is the same in reality under different names. They have a high notion of the value of sleep; and their maxim is, that "one sleepless night cannot be compensated by ten nights of sleep."

As remarked by Dr. Abel, the drug-shops of the Chinese contain an immense list of simples, a few gums, and some minerals. These are sold in small packets, each containing a dose enveloped in a wrapper, which describes the use of the medicine. Chinese doctors paste up and distribute hand-bills in the same manner with the lower walks of the faculty among us, and generally with reference to the same diseases. The druggists' shops are remarkable for their superior cleanliness, and not unlike

* The author is glad to find his opinion confirmed by that of Mr. Herbert Mayo, who observes, in reference to some portions of this treatise—"In substance they are excellent."—*Philosophy of Living*, p. 171.

those of Europe in the arrangement of the drawers, jars, &c. It is well known that the most considerable work on Chinese materia medica is the famous *Pun-tsaou*, or Herbal, which is not confined to botany merely, as its name might imply, but extends to the animal and mineral kingdoms also. At the head of all remedies stands *ginseng*, which used once to be sold for eight times its weight in silver. Tea, in various modes of preparation, is much valued as a medicine; and different parts of rare animals are included in the list, with the reputation of properties as multifarious and inconsistent as the pills of a London quack.

In some instances they show a whimsical preference to one substance over another, which apparently possesses exactly the same nature and qualities. From the *laurus camphora*, a large timber-tree, which grows plentifully in their own country, they obtain easily and cheaply vast quantities of camphor, which is sold as low as a few pence the pound. Instead of this, however, they use in medicine a species which is imported from Sumatra and Borneo, in very small fragments about the size of a pea, picked in a crystallized state from the interior of the *dryobalanops camphora*, and sold at Canton for a price which is equivalent to 4*l.* sterling the pound weight. As a drastic medicine, the *pa-tow* (croton tiglium) is used in combination with rhubarb. Among the most effectual means for the alleviation or removal of local pain, they reckon the application of the moxa, or actual cautery. This moxa is prepared by bruising the stems of an artemisia, called *gae-tsaou*, in a mortar, and then selecting the most downy fibres. These, being set on fire upon the part affected, are said to consume rapidly without producing any severe pain. The fibre of the artemisia is also used by the Chinese as tinder for lighting their pipes, being previously

steeped in a solution of nitre, and fired, either by means of a flint and steel, or a small burning-glass; which last expedient the mandarins in the embassy sometimes displayed to us with much ostentation, as something that should astound our ignorance.

Sir William Temple, in his works,* has left a paper on the use of the moxa, proving that remedy to have effectually cured him of a fit of the gout. He met with it in Holland while residing as minister at the Hague, where a friend told him "it was a certain kind of moss that grew in the *East Indies;* that their way was, whenever anybody fell into a fit of the gout, to take a small quantity of it, and form it into a figure, broad at bottom as a two-pence, and pointed at top: to set the bottom exactly upon the place where the violence of the pain was fixed; then with a small round perfumed match (made likewise in the Indies) to give fire to the top of the moss; which, burning down by degrees, came at length to the skin and burned it, till the moss was consumed to ashes."

From this description, and the statement that the remedy came direct from Batavia, it is plain that the Dutch obtained it in their intercourse with China, either from Canton or Fokien. The perfumed match was, of course, a Jos-stick.

A physician whom Dr. Abel saw at Canton was entirely destitute of anatomical knowledge. He appeared to be aware that there were such viscera as the heart, lungs, and liver, but had no notion of their real situation, or, like the "doctor against his will" in Molière, placed them on the wrong sides of the body. Still he appeared not to be ignorant through choice, as he eagerly examined some anatomical plates from the factory library, declaring that such delineations on a large scale would be a most valu-

* Vol. iii. p. 254.

able acquisition.* We must observe, however, that though they never either dissect or practise amputation (except that of the head),† and are consequently ignorant of the structure and functions of the vital organs, they have a tolerable acquaintance with *osteology*, or the knowledge of the skeleton.‡ The importance which they attach to the remains of their deceased relatives is such, that on a change of abode, or for some other reason, they often disinter the bones, and place them in a jar for removal. On an occasion of the kind, the writer of this once stood by an old man while he was taking out one by one, and with the utmost solemnity, the loose bones from a decayed coffin; and, as he placed them separately in the jar, he made an exact inventory on a slip of paper, giving to each its proper name, that none might be omitted. The skull was put in last, and crowned this pious work; nor was a bone omitted, even to the phalanges of the hands and feet.

The Chinese occasionally practise a species of forensic medicine, to ascertain from *external* indications the mode in which any person came by his death. A lad had one day been found dead in a house not far from the factories at Canton, and, as it was suspected that violence had occasioned his death, the magistrate instituted his court near

* Dr. Abel observes of this person, that, though ignorant of all rational principles of practice, he had arrived at some rules of high utility, distinguishing between local diseases which can be cured by mere topical applications, and those to be acted on only through the medium of the constitution.

† The punishment of cutting into pieces, as the Europeans at Canton call it, is known to consist of a few mortal cuts and stabs, after tying the criminal to a post.

‡ To a certain extent they are phrenologists, and have some faith in the external indications of the skull. They look for the principal characteristics of a man in his forehead, and of a woman in the back part of the cranium.

to the spot. The several parties implicated or suspected were brought before him and examined, some of them with torture. The body being extended upon boards, a quantity of mash, composed of some grain in a boiling hot state, was laid over it. After a time this was removed, and from the appearance of the skin and muscles they appeared to form a judgment as to the cause of the individual's death. It is needless to remark in how very few cases this superficial mode of examination could be of any use in ascertaining the multiform ways in which life may be extinguished.

Some notable instances of the ignorance of Chinese physicians are recorded by the late Sir George Staunton,* from the experience of Dr. Gillan, when he was called in to prescribe for the chief minister Ho-choong-tâng. A completely-formed hernia had been mistaken by the native Sangrados for what they called "an accumulation of noxious vapour," to get rid of which the puncture of the part had been recommended. Luckily for the patient, he had resisted this practice, being perhaps unwilling to subscribe to the maxim of the doctor in the play, "qu'il faut mourir selon les règles." Another instance is mentioned in the same work. One of Lord Macartney's suite, labouring under a dysentery on the road between Peking and Tartary, was induced in evil hour to consult a native physician. The practitioner, after dilating on the doctrine of the pulse, and delivering a discourse on hot and cold humours, pronounced that the patient laboured under the *latter;* and, by way of warming him, administered strong doses of pepper, cardamoms, and ginger, taken in distilled spirit. The individual escaped alive with some difficulty.

When a physician has been unsuccessful, he retires with

* Embassy, vol. ii.

the common Chinese adage, "that there is medicine for sickness, but none for fate." The low state of the art may partly be explained by the small consideration in which the profession is held, and by there being no public schools of medicine, nor any way of acquiring their limited knowledge, except by engaging with some person already in practice. That they occasionally gain considerable reputation and profit seems clear from the success of a fashionable doctor at Canton, of whom there is some account in the 'Chinese Repository,'* and who rose from the condition of a mere hawker of drugs to be the medical oracle of the neighbourhood. His house is opened early in the morning to patients who call, and these are ushered into his presence one by one. At a regular hour he sallies out to see those who send for him to their houses, and receives what they choose to give him. He is a man of few words, and either will not, or cannot, explain the operation of his prescriptions; but people are said very generally to get well under his care. An instance was known at Canton of an English gentleman of some attainments, who, finding that his health did not improve in the hands of his own countrymen, actually sent for a Chinese doctor, and declared that he benefited by his drugs, which were principally simples. There is some sense, at least, in the following cure for opium-smoking, and it may be fairly supposed that the efficacy lies more in the rule for administering the remedy than the remedy itself. The patient is instructed to diminish his quantity of opium daily, and, beginning with a little of the substitute, to increase that every day until the opium is left off altogether; then gradually to diminish the substitute, until that also is altogether disused.

In Du Halde we find about one hundred pages devoted

* Vol. i. p. 343.

to the Chinese "doctrine of the pulse," which bears on the very face of it the plainest evidence of being a mere mass of solemn quackery, and is avowedly connected with that precious scheme of the five planets, the five viscera, elements, tastes, &c., already given at page 225. Their ignorance of the true secret of the circulation is proved by their imagining that there is a distinct and different pulse in every part of the body. Nay, they pretend to distinguish three on one arm, the first immediately on the *metacarpus*, called "the inch," and two others higher up towards the elbow, called respectively the "bar" and the "cubit;" perhaps referring to the two bones of the forearm. These are supposed to be connected with the "five viscera" and the "five elements." In this manner they proceed to distinguish twenty-four different *kinds* of pulse, which, being multiplied by the *places* where they occur, make the whole number of indications too numerous to reckon up.

They do not even know the distinction between arteries and veins, and certainly not a syllable of the function of the lungs in oxygenizing the blood, and getting rid of its superfluous carbon. Of the existence of certain sympathies between the different viscera, and of derangement being communicated to one by the disorders of another, they might seem to have some glimmering, and to express it strangely by calling the heart "the husband," and the lungs "the wife," &c. Without the practice of dissection, it would be singular indeed if they *did* know much; and both law and prejudice put that out of the question. We may remember that, even in this country, it is but a very short period since dissection was legalized on any scale; before which a surgeon was punishable at one and the same time for not knowing his profession, and for trying to learn it in the only effectual manner.

The Chinese physiologists expressly call man a *seaou Tien-ty*, a "little universe, or microcosm," and they extend to this the same doctrine of the *Yin* and *Yâng*, or of the dual principle, which has been mentioned in our fourteenth chapter, as originating the existence and maintaining the order and harmony of the natural world. They suppose that on a due proportion between these, or between *strength* and *weakness*, *heat* and *cold*, *dry* and *moist*, &c., consists the health of the human body; and that different degrees of excess or defect produce disease, and ultimately death. There is a great pretension to harmony and consistency throughout their whole system of physics, which perhaps might be called *beautiful*, were it only *true*, and based upon something better than empty speculation. If it is often unintelligible, or a mere arrangement of words without ideas, this renders it to them only the more mysterious and worthy of admiration, for "true no meaning (as Pope says) puzzles more than wit."

Enough has been done for the Chinese at Canton, if open to conviction, to impress them with the value of the medical science of Europe. The small-pox formerly committed dreadful ravages among them. Their mode of inoculation was to place a little of the virus, taken from a former patient, dried and reduced to powder, on cotton-wool, and to insert this in the nostril. It may be inferred, that, as blindness is an extremely common occurrence, and a large number in that condition are deeply marked with small-pox, the inflammation caused by the above mode of inoculation occasioned the loss of sight in many cases. But both the small-pox, and that imperfect or injurious mode of guarding against its effects, were destined to yield to the benign influence of vaccination, which was introduced, and ultimately established, by the active and

persevering humanity of Mr. Pearson, principal surgeon to the British factory. It finally obtained the sanction of the local government; and native vaccinators, who at first operated under the supervision of that gentleman, now practise on all classes.

From the periodical reports, it appears that, in one instance, the benefit which Mr. Pearson thus conferred upon the largest associated population in the world met with singular obstacles in a particular quarter. After having extended to the province of Keang-sy, adjoining Canton to the north-east, it was suddenly dropped there, being opposed by the jealousy of the Budhist priests, who, in that part of China, had a double interest in the *preservation* of the small-pox. In the first place, they were much employed in the business of inoculation after the Chinese method; and, secondly, they were well paid for certain ministrations with their deities* to avert or mitigate the scourge. Thus it was that these worthies, who benefited by the harvest, always wished to leave a little for seed. The breaking out of the scarlet fever unfortunately afforded them plausible ground of crimination against a practice which was said to retain the poison in the system, to appear at a future time in a still worse shape.

The general success, however, of this invaluable remedy is a singular exception to the usual reception which knowledge or improvements meet with in the celestial empire. As a summary of the latest reports of Mr. Pearson, it may be stated that the practice of vaccination has acquired great stability among the Chinese of Canton province, of every condition; that it is known to have been conveyed

* They have one particular idol, whose name may be construed "Our Lady of the Small-pox."

again to Keang-sy, as well as to other provinces; that it even reached Peking, but unfortunately was soon lost there; that its anti-variolous efficacy is universally known and confided in; and that its preservation has resulted from the well-adapted system pursued, and the agency of the Chinese vaccinators. The principal of these, under the instruction of Mr. Pearson, was a former purveyor to the East India Company at Canton. He was encouraged in his exertions by the favourable opinion of his countrymen, and by marks of distinction conferred on him by the higher functionaries of the local government. From all the evidence obtained, it appears that the practice of vaccination in China, if it fails occasionally, though very unfrequently, in affording a perfect security against the occurrence of the disease, invariably mitigates the severity of small-pox.

Of the progress of the natives in chemistry, as allied to medicine, Mr. Pearson acquired a fuller knowledge than any other European; and as he has very kindly, at the requisition of the writer of this, furnished his own memoranda on the subject, the curious information contained in them is here given. He had long observed that the shops of the Chinese apothecaries were supplied with various preparations of quicksilver, and that they afforded as many resources for medical practice derived from that mineral as those of our own country; but to any inquiries respecting the chemical processes by which they were prepared, he could obtain only vague and incorrect answers; it appearing to be no part of the profession or duty of the vendors to possess knowledge of that kind. Having found a person whose occupation it was to prepare some of them, and to dispose of them to the medicine-shops, Mr. Pearson engaged him to go through the different steps of the processes in his presence, and the

operator brought his materials with him. For the preparation of a muriate of quicksilver they were—

	Grains.
Sulphate of iron	940
Sulphate of alumine	920
Nitrate of potash (very impure) . . .	900
Sulphuret of quicksilver	120
Another sulphuret, uncertain (of a yellow colour and finely levigated) . . .	660
Quicksilver	660
Muriate of soda	920
Sub-borate of soda	930

An apparatus and vessels were readily procured on the spot, his furnace being one of the portable cooking-stoves of baked clay in use among the Chinese; besides an unglazed earthenware dish, of the capacity of about a pound; one of a similar shape, and rather more than double that capacity, of which he had the bottom beaten out; a common flat porcelain plate; and a large earthenware vessel, with some water at the bottom. Having mixed all the ingredients, except the two sulphurets and the quicksilver, he put them into the unglazed earthenware dish. He then strewed the two sulphurets over the contents, and placed the dish upon the furnace, over a few thoroughly ignited charcoal embers. The whole (except the lump of nitre) being fused in about half an hour, he added the quicksilver, and increased the fire, though still the heat was very moderate. After an hour, and when the materials had fused together and blistered up, he removed the vessel, with a spongy mass adhering to it, from the fire, and inverted it so as to pour out a portion of the quicksilver, which he returned to the vessel and placed it again on the fire. Upon removing it after ten minutes, and finding upon trial that no quicksilver escaped, he inverted

it upon the plate, and heaped up common salt all round the sides of the dish, and also over its inverted bottom. Over this he inverted the other (larger) dish with its bottom beat out, so that its rims rested on the edges of the flat plate. Then taking another earthenware dish, he placed it in the large vessel, bottom upwards in the water, so as to serve for a stand; and upon this he put the plate, with the under surface of which the water was now in contact, but not rising over its edges. He now heaped more salt upon the bottom of the dish, and filled the interstices between the salt and the outer dish with pieces of ignited charcoal. In half an hour he added more charcoal, and urged the fire by fanning; applying his ear from time to time in order to listen, he said, for a hissing and bubbling. This he watched for, and announced its occurrence with the charlatanerie of an alchemist.

He returned next day, bringing a standard specimen of the substance sought from such a process as he was conducting; and proceeding to remove the charcoal ashes and the salt, he lifted up the inverted dish. The product was collected on the plate, some of it white, some discoloured, and also some quicksilver not at all oxidized; that being removed, the whole muriate was collected, and found to weigh 240 grains. The product bore comparison with the standard preparation very ill, and he said that, in manufacturing the article for sale, he had no other resource on such occasions than a repetition of the process, until he succeeded better than in the present instance. He showed himself to be considerably disappointed by the result of this experiment, and requested to be allowed to repeat it with his own materials, except the nitrate of potash, which was supplied to him. He went through every step of the same process with accurate adherence; and in this instance the experiment succeeded, as from

the plate, and those portions of the dish unoccupied by the mixture, two drachms of a white powder, mixed with fine needle-like crystals, were removed with a feather, and by scraping. This approached the standard pretty nearly, and appeared to be altogether as white and pure as any specimens Mr. Pearson had seen from their shops.

In the preparation of the red nitric oxyde of quicksilver, the furnace used by the native operator was the same as before, but his vessel was a cast-iron pan of a size proportioned to it, and of the description and shape which goes by the name of a tatch. Before putting the ingredients into it, he allowed this to become thoroughly hot by pieces of burning charcoal placed under it. His ingredients were now—

Sulphate of alumine,
Nitrate of potash,
Quicksilver,—each 1920 grains.

He fused the first by itself, and added to it the nitrate of potash, and then the quicksilver. His fire was now stronger than in the last process, and, after the ingredients had been exposed uncovered to its quick action during a few minutes, the operator inverted a large glazed earthenware bowl over them, of such diameter as to leave about an inch of the edges of the pan beyond its rims. He heaped salt round the sides and over the bottom of the bowl, upon which he placed a brick. When nitrous acid vapours began to come through the salt, he appeared at first disposed to stop their egress by adding fresh salt; after which he paid no further attention to them. By the addition of thoroughly ignited pieces of charcoal, he kept up a considerable degree of heat under the tatch for upwards of two hours, when, having filled the furnace with pieces of charcoal, he said it might be allowed to

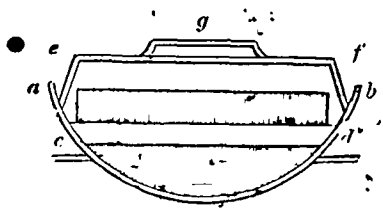
burn out and the vessels to cool. Next morning, when the brick and salt were removed, the nitric oxyde of quicksilver was found closely adhering to, and crusting the inside of the bowl. When the whole was scraped off and collected, it weighed 1440 grains.

The process employed in procuring a sulphuric oxyde, as well as another oxyde of quicksilver, Mr. Pearson likewise describes in detail. Of the existence of the mineral acids in an uncombined state he believes them to be wholly ignorant. He mentions another of their mercurial preparations, the only one which they seem ever to administer internally, and which he conceives to be a very general and useful instrument of their medical practice, answering to calomel in ours. Of the process used in preparing the same he could obtain no accurate account, as it comes only from the province of Fokien, in small boxes wrapped in a printed paper; it appears in fine flakes of a pearly-white colour. As the Chinese are perfectly acquainted with the mode of oxygenizing quicksilver by triture, it may be supposed that they adopt that form also of administering it. The most prevalent mode, Mr. Pearson believes, is by triturating the mercury with fresh and juicy leaves into a pulp, and until all globules disappear. The leaf in which they wrap up betel for mastication is generally made use of, and, with the addition of some unimportant ingredients, a mass for pills is formed.

It appears, then, that the Chinese are possessed of a variety of active preparations of quicksilver, nearly similar to those which Europeans use; their processes being more cumbrous, unscientific, and uncertain as to the results than ours, and greatly more expensive. Mr. Pearson apprehends, too, that they apply them to nearly the same practical purposes as ourselves; but whether for good or evil must, on account of the state of their medical know-

ledge, depend more on the experience and good judgment of the individual practitioner than is the case amongst us. With the disease in which the efficacy of mercury is most complete, they as invariably associate the remedial use of, and necessity for recourse to it, as Europeans can possibly do. Upon the whole, Mr. Pearson's inquiries afford a curious proof of similar results attained by the most different and distant nations, possessing very unequal scientific attainments; and they bear no unfavourable testimony to Chinese shrewdness and ingenuity in the existing state of their knowledge.

Although unacquainted with the mechanical *force* to be derived from steam, the great *heat* of that agent under confinement is applied by them in the simplest manner in their daily cookery. Thus *a b* is the vertical section of a large cast-iron pan, which in shape is the segment of a sphere. This holds the water, in which anything may be boiled. Over the boiling water is placed a slight wooden frame, being an equilateral triangle, supported by its three points against the sides of the iron pan, at the height *c d*. On this triangle is laid a sieve, containing rice or other vegetables, which are cooked by means of the steam, whose escape is prevented by a wooden cover *e f*, resembling an inverted tub, with a handle to lift it by at *g*.



They perfectly understand the process of distillation, by which they produce their ardent spirits, the best of which resemble whisky. The grain first undergoes the vinous fermentation in water, which is assisted by the addition of a fermenting substance. In this state the

liquor is clarified and used as wine. If the spirit be wanted, the vinous liquor then becomes subjected to the alembic. We may, among other matters, mention their manufacture of the sulphate of iron, as witnessed by Dr. Abel: "a quantity of hepatic iron pyrites, in small pieces, mixed with an equal quantity of coal in the same state, being placed together in a heap, the whole is covered with a coating of lime-plaster. In a short time great action takes place in the mass, accompanied by the extrication of much heat and smoke, which is allowed to go on until it has spontaneously ceased. The heap is then broken up and put into water, which is boiled until considerably reduced in volume, and then evaporated in shallow vessels." Very pure crystals of sulphate are said to be thus produced.

In 1821 Dr. Morrison adopted the idea of establishing near his own house at Macao, with the co-operation of Mr. Livingstone, the assistant-surgeon to the British factory, a dispensary for the relief of Chinese patients; and (with a view to obtaining at the same time some knowledge of the native practice) he purchased about eight hundred volumes on their medicine and pharmacopœia, and engaged the attendance of a native doctor at his dispensary. Without applying for a single subscription from individuals, hundreds of Chinese were relieved of disease and suffering under various forms, and more than three hundred of these made very grateful acknowledgments for renovated health.* The liberal medical establishment of the East India Company in China being broken up, the English surgeons subsist on reduced emoluments, and, being no longer able to distribute medicine gratis to strangers, are obliged to send in their

* Chinese Gleaner, vol. iii. p. 7..

apothecaries' bills. The time, besides, which might formerly be devoted to liberal inquiries into the state of medical knowledge in the country, must now be absorbed by the pressing calls of their business. Another class of men, however, the medical missionaries, have sprung up (especially Dr. Parker, the American), and these have not only conferred the most extensive benefits on the Chinese, but greatly exalted the estimation of European science and benevolence.

The account of the native practitioner who attended at Dr. Morrison's dispensary under the observation of Mr. Livingstone was favourable as to his intelligence and general character. To all those particular cases in which mercury is a specific he conducted himself with some severity, and generally refused to prescribe for them. This branch of practice, he declared, was commonly declined by the regular members of the Chinese faculty, being in the hands of *barber-surgeons*, who use, externally, a preparation of three ingredients, namely, mercury, arsenic, and what is supposed to be a sublimate of quicksilver in powder. The author of the *Pun-tsaou*, or great work on materia medica, states it to be above a thousand years since mercury, which they call "water-silver" (literally *hydrargyrum*), became famous. One of its most legitimate uses at present is as a vermifuge, or anthelmintic; and it is also used in diseases of the skin arising from the presence of animalculæ.

The Chinese themselves are not ignorant of institutions where the sick are attended gratis. One was found at Shanghae. A crowd waited on the outside to receive their tickets of admission; with these they proceeded in turn to the interior hall, where a number of doctors were seated at separate tables, feeling pulses and asking questions. One clerk noted down the symptoms, and another

wrote the prescriptions, dispensed gratuitously. The whole was very well conducted.*

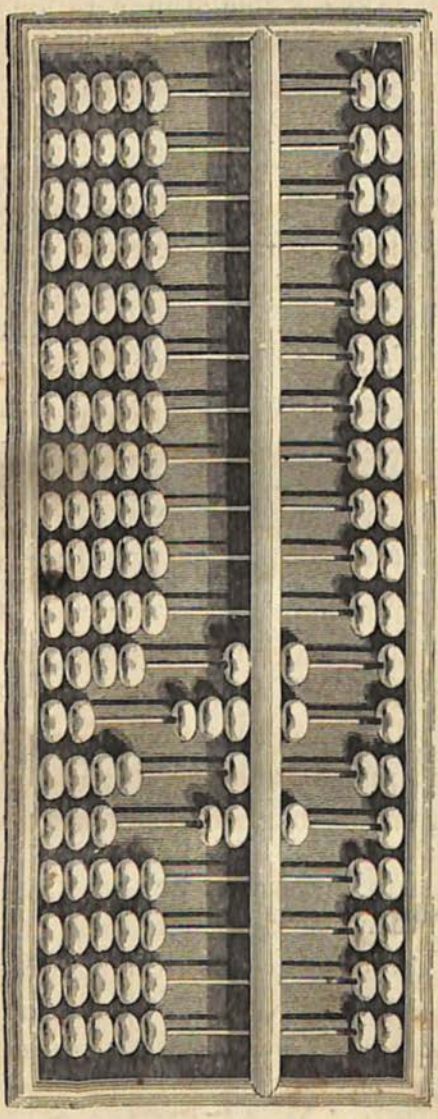
In addition to the ancient use of mercury in medicine, the Chinese appear to have been acquainted with the sulphate of soda (known in Europe under the name of *Glauber's salt*) about twelve centuries ago. Its notoriety is said to have been occasioned by the following circumstance. The reigning emperor heard that there lived somewhere in his dominions a disciple of *Laou-tsze*,† one of those alchemists who for so many centuries had been in search of the *elixir of immortality*—a pursuit which has in China produced effects similar to those resulting from the hunt after the philosopher's stone in Europe. Being of great age, the professor appeared to realize in his own person the virtues of his nostrums, and he was accordingly summoned to court and examined. The alchemist attributed his longevity to the use of the "bright powder of Heuen," as it was called after his own name, just in the way that Glauber's salt was named from its German discoverer. It is valued at present by the Chinese as a cleanser and purifier of the system, in accordance with their doctrine of "hot and cold humours."

Proceed we now from medicine to another subject. In the science of numbers, and in geometry, the Chinese have, as usual, nothing to teach us; being, on the contrary, indebted for a good deal to Europe, as may be seen from the logarithmic tables and other works prepared for the Emperor Kâng-hy by the Jesuits. Their arithmetic, as well as their weights and measures, proceed universally on the decimal scale; and decimal fractions are their *vulgar* fractions, or those in common use. It is remarkable that the single exception to this consists in their *kin*, or market-

* China since the Peace, p. 62.

† Whose sect is described in the sixteenth chapter.

ing pound weight, which, like ours, is divided into sixteen parts. It is most probable that both originated in the facilities afforded by the binary division into halves, quarters, eighths, and sixteenths. The sexagesimal division of the great circle was early borrowed by the Chinese from the Arabians, and of course used by the missionaries in the construction of their trigonometrical map of the empire. No algebraic knowledge is to be found in China, while it is certain that the *Hindoo* attainments in algebra were much superior to their astronomical science, and bear, besides, all the features of originality, which the latter does not.

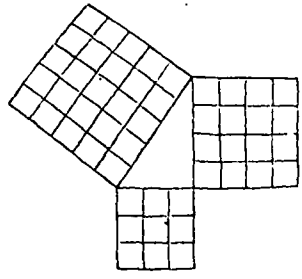


Chinese Abacus.

The Chinese numbers are *written* in words at length, that is, unlike the Arabic system of numeration, where the powers of the numbers increase or diminish decimally according to position. This inconvenience is got over, in calculation, by the assistance of a little apparatus called a *Suân-*

pân, or "calculating dish," having balls of wood or ivory strung upon wires in separate columns, of which one column represents units, with a decimal increase and diminution to the left and right, as in our system of numeration. Each ball above the longitudinal division of the board represents *five;* and each ball below it stands for *one*. The number represented in the cut is therefore 6817, and, if there were any decimal parts, these would be ranged to the right of the units. At Canton they sometimes write down numbers in abbreviated marks, and place them, like our Arabic figures, in numerical order; but still, in arithmetical operations, the above machine is always used, and seems never to have been superseded. Its chief disadvantage is this, that no traces remain of the operation after it is concluded, which, in the event of error, necessitates the work being recommenced *de novo*.

The Chinese books contain a diagram which in a manner *represents* the mathematical truth enunciated by the 47th proposition of the first book of Euclid. This, however, is not demonstrated mathematically (which requires reference to preceding propositions in the same book), but by construction or measurement. In a right-angled triangle, whose sides are as 5, 4, 3, the squares are as 25, 16, and 9; and it is only when the sides are in these *exact* proportions that such a clumsy sort of proof can be given of the proposition, that "the square of the hypothenuse equals the sum of the squares of the other two sides," or $25 = 16 + 9$. Mr. Barrow has observed that the open and closed points connected by lines, and said by the Chinese to have been found on the back of the



tortoise, are nothing but representations of the nine digits, placed in such a manner as to count fifteen every way, thus:—

2	9	4
7	5	3
6	1	8

Such are the puerile matters that are contained in the ancient and original works of the Chinese. Without geometry, it was impossible for them to have any correct notions of geography; and, but for their liberal and enlightened Emperor Kâng-hy, who availed himself of the aid of the Jesuits, they might even to this day have represented their country as the centre of a circle, studded round with the abodes of the rest of mankind. But they have learned to appreciate the maps of the several provinces, and of the whole empire, constructed for them more than a hundred years since by the Europeans at Peking, and copied by them servilely in most particulars, the chief defect being in the execution of minute details. The writer of this has a geographical work taken from wooden blocks, which is sufficiently correct for purposes of ordinary reference. Every province is separately laid down on the spherical projection, with parallels of latitude, and meridians of longitude; the former calculated, like ours, from the equator, but the longitude from Peking. Minute accuracy, however, is not at all observed: rivers are represented on a very disproportionate scale, conformably to the Chinese ideas of their importance, serving as they do for the principal high roads of the empire. Everything external to their own country, and Tartary, they seem to be quite indifferent about; and with the exception of a rough map of the two terrestrial hemispheres, copied from one by the Jesuits, no work on general geography is ever met with.

The missionaries first recommended themselves to the

favour of the emperor and his court by amusing them with a variety of philosophical contrivances of an ingenious nature. In dioptrics and catoptrics they exhibited the effects produced by various lenses; the artificial rainbows resulting from the transmission of the rays of light through prisms, with their subsequent reflection; the uses of the telescope and the microscope; and, what pleased the ladies of the palace more than anything, they contrived a *camera obscura*, by means of which every object passing outside was made visible on a flat table within the apartments. In hydrostatics and hydraulics they constructed pumps, siphons, and fountains, some of which were applied to purposes of use or ornament about the emperor's residence. In dialling, too, the Jesuits gave them lessons which they have not yet forgotten, as we often see in their shops a contrivance attached to their compass, with which the hour of the day is roughly ascertained, by the shadow of a string that serves as the gnomon of a dial.

But it was in astronomy that the greatest assistance was derived from European science and skill. When Père Verbiest arrived at Peking, he found an Arabian astronomer employed in the construction of the Imperial Almanac. This person was so ignorant of his business that he had inserted an intercalary month in the current lunar year, when it should have consisted of only twelve lunations. This afforded Verbiest an occasion for proving the superiority of his own science, and having the calendar altered, though with some difficulty, the Chinese being sorely puzzled to know why they should be deprived of a whole month. The Jesuit proved the ignorance of the Arabian by challenging him to calculate, beforehand, the length of the shadow of a gnomon on a particular day at noon. The professor failed altogether, and was succeeded in his office by the missionary, whose

calculation proved nicely accurate; and thus the Europeans became established at the head of the Astronomical Board, from which they were dismissed only a few years since. The instruments constructed under the direction of Verbiest, for the imperial observatory at Peking, have been described by Le Compte. They consisted of an armillary sphere, an equinoctial sphere, a celestial globe, an azimuth horizon, and a quadrant and sextant.*

The simple fact that a people so vain and self-sufficient as the Chinese should have adopted the science of foreigners, and raised the professors of that science to considerable dignities—that they should have deviated, on a point of such consequence, from their established prejudices and maxims—sufficiently proves that they had little science of their own. It is true that Confucius recorded thirty-six eclipses of the sun, the greater number of which have been verified by the calculations of European astronomers; but, as has been very truly observed, the *recording* an eclipse may prove the authenticity of historical annals, while at the same time it proves nothing as to the existence of astronomical science. As far as related to the mere *observation* of the sky, the Chinese have from the earliest periods been very particular and assiduous. The remark of Du Halde, that "all these observations are not

* The work, in one hundred Chinese volumes, composed and translated by Matthew Ricci and other missionaries, by desire of Kâng-hy, is a remarkable production. It is executed in the best style of native books, and, being now very scarce and expensive, cannot be procured under sixty or eighty Spanish dollars, which is quite a *fancy price* for a Chinese work. It treats of spherical trigonometry, geometry, astronomy, and music, and contains also tables of logarithms, which were merely turned into native figures, and not calculated by the missionaries. The diagrams in geometry are accurately and neatly cut, and the whole is a very respectable specimen of printing, worthy of the emperor's patronage. The title means in English, "The profound sources of numbers—by imperial authority."

a little serviceable in ascertaining their chronology," is very true; but they by no means prove (what he appears sometimes desirous to establish) that the Chinese were astronomers.*

We read indeed, in their history, that the blunders of some of their pretended philosophers were ingeniously turned into an occasion of flattering the sovereign. In the time of Soong, a predicted eclipse having failed of accomplishment, they congratulated the emperor that the heavens had dispensed with this omen of ill-luck in his favour. The very superstition argues an ignorance of the real causes of eclipses; but, on this point, it is possible that the government saw the advantage of wielding the mysteries of astronomy and astrology as an engine of power over the ignorance of the people. It has therefore made a monopoly of the subject, and declared it death to publish a counterfeit or imitation of the Imperial Almanac. The extravagancies of the populace during the obscuration caused by an eclipse are countenanced by the government. Though the emperor either does or ought to know better, he and his court go through sundry ceremonies on those occasions; and he affects sometimes to consider the eclipse as a warning to him for something wrong in the administration.

But the most alarming prodigy of all is a comet, and this superstition they have had in common with many other nations. According to their shape and appearance, comets are called by the Chinese *broom stars*, *hairy stars*, and *tail stars*, and they are said to point the tail towards the region of whose ruin they are the presage. One of these appeared in May, 1820, and was observed by Mr. Reeves at Macao, on the 5th of that month, in the body of Centaur; its position being such as to be cut by two

* Phil. Trans. 1823. *On the Chinese year.*

straight lines, one of them drawn through α and β, or the foot and easternmost arm of the Cross, and produced N.E., the other through ε and β, or the western foot of Centaur. After the first observation it became more visible by degrees, and then slowly disappeared towards the north-east. The Chinese affect to draw presages from the appearances of comets, and here they bring into play their foolish theory of the *five* colours.* If the appearance be red, particular consequences are to follow; if dark, they expect the overthrow of regular government, and the success of rebellions, &c.

A comparison between the ancient systems of Chinese and of Hindoo astronomy is rendered somewhat perplexing by the fact, that, while there are some points of resemblance, there are others in which they essentially differ: both of them have twenty-eight lunar mansions, and a cycle of sixty years; but a careful observation detects some important distinctions; the Hindoo cycle is a cycle of Jupiter, while that of the Chinese is a solar cycle; and the twenty-eight constellations of the Hindoos are nearly all of them equal divisions of the great circle, consisting of about 13° each, while the Chinese constellations are extremely unequal, varying from 30° to less than 1°. The author's father, in conjunction with Sir William Jones and MM. Colebrooke and Bentley, proved that the Hindoo astronomy did not go farther than the calculations of eclipses and some other phenomena, with the rules and tables for performing the same. Besides their lunar zodiac of twenty-eight mansions, the Hindoos (unlike the Chinese) have the solar, including twelve signs perfectly identical with ours, and demonstrating in that respect a common origin. As we know from Herodotus that the Egyptians had a week of seven days, so it is remarkable that the

* See p. 225.

Hindoos had anciently the same, the planetary names being given to the days exactly in the same order as among us in Europe, but Friday being the first. The Chinese reckon *five* planets, to the exclusion of the sun and moon; but they give the name of one of their twenty-eight lunar mansions successively to each day of the year in a perpetual rotation, without regard to the moon's changes; so that the same four out of the twenty-eight invariably fall on our Sundays, and constitute, as it were, perpetual *Sunday letters*. A native Chinese first remarked this odd fact to the author, and on examination it proved perfectly correct.

The Hindoos divide the ecliptic into 360 degrees; and, being the reputed inventors of decimal arithmetic, the singularity has been remarked of their using sexagesimal fractions in astronomy. It seems probable (as already observed) that the Chinese borrowed this division of the great circle from the Arabians. One coincidence with the Hindoos may be noticed. Sir William Jones remarks that, in their nuptial ceremonies, they had a constellation of *three stars*, called *abhijit*, for some astrological purpose: the Chinese ancient book of songs associates *three stars* with marriage, in this line of an epithalamium—"The three stars shine on the gate." The astronomical works of the Hindoos, like those of the ancient Chinese, make no mention of observations, nor even of an instrument. According to the conclusions of Delambre, the Hindoo knowledge of astronomy was greatly inferior to that of the Greeks; and it has been argued by Laplace, in opposition to the previous opinion of Bailly, that the Indian astronomy is not of the highest antiquity, but must have been imperfectly borrowed from the Greeks.

There can be no doubt of the instruments, mentioned by Du Halde as found by the Jesuits on their first

entrance into China, having been constructed by Arabians. De Pauw supposes that they were made at Balk in Bactriana, and passed into China during the Mongol government. The writer of this, however, observed in an old Chinese encyclopædia that the height of the North Pole was stated as being 36° above the horizon; and it appears from Du Halde that the instruments in question were also calculated for 36°. Now, as the elevation of the pole at any particular place is exactly the latitude of that place, it seems reasonable to conclude that those instruments were constructed when the Chinese observatory was south of Peking, and probably in Honân, a province in which the capital once stood. They would at least be useless in the north. The observation of Du Halde, that "the uses of the instruments were written in Chinese characters, with the names of the twenty-eight constellations," is no evidence against their construction by the Arabians, though it *is* against their transportation from Balk. The guns which were cast for the Chinese by the Romish priests were all inscribed with the characters of the country; and the ungrateful vanity of that people has invariably led them, after borrowing anything from Europeans, to conceal the debt as much as possible. When Mr. Pearson made them his invaluable present of the vaccine inoculation, it was accompanied by a small pamphlet in Chinese (written by Sir George Staunton), containing some necessary directions for the use of the virus, and stating the discovery to have been English. An edition of this was very soon after published, in which not one word was retained as to its origin, nor any trace by which it could be known that the discovery of vaccination was otherwise than Chinese.

Their civil year is lunar, consisting of twelve months of twenty-nine and thirty days alternately, with the

triennial intercalation of a thirteenth month; or, to speak more exactly, with the addition of a thirteenth month to *seven* years out of *nineteen*. They probably at first adopted the sol-lunar cycle of nineteen years, the same with the Metonic cycle of the Greeks, the years of which were marked with the *golden number;* and seven of them (as with the Chinese) consisted of thirteen lunations. But the returning period of even *this* cycle being attended with a small error, their cycle of *sixty years* was at length adopted by the Chinese, comprising twenty-two intercalary moons. This answered the double purpose of regulating the sol-lunar year, and constituting a chronological era, with which they pretend to reckon back more than 2000 years B.C. The era, however, may have been ante-dated, for the sake of an assumed antiquity.

At the same time, it is observed by Dugald Stewart,* that, a cycle being commonly deducible from observations of physical events which are obvious to the senses, the most celebrated astronomical cycles are of a very remote antiquity, and were probably discovered at a period when the study of astronomy consisted merely in accumulating and recording the most striking appearances of the heavens. We have before remarked that the Chinese have always been very attentive to the celestial phenomena, and patient observers of times and tides. They appear very early to have divined that the moon had the principal share in causing the flux and reflux of the sea; but they left the sun out of the question altogether. M. Klaproth remarked that, in an encyclopædia written before the close of the ninth century, it is said that "the moon, being the purest principle of water, influences the tides." Another writer observes, in the twelfth century, that "the cause of the rising and falling of the sea consists in the proximity of the

* Philosophy, p. 436.

moon; for the waters go and come according to the period of the day and the position of the moon, which they follow."

No very certain reason can be given why the Chinese fixed upon the 15th degree of Aquarius as a point for regulating the commencement of their lunar year: but they have an annual festival at the recurrence of that period, which bears some resemblance to the annual procession of the bull Apis among the Egyptians; and both ceremonies appear to have been connected with the business of husbandry, and with the opening promise of the year. It may possibly be the case that the 15th of Aquarius has a reference among the Chinese to the position of the winter *solstitial colure* at a remote period. The winter solstice is at present observed as a festival; but whether or not that proves its having once been the period of their civil year's commencement cannot easily be decided. In an astronomical sense, they may be said to have a solar year as well as a lunar, and the winter solstice marks its annual limit. This solar year is divided into twenty-four periods of fifteen days each on an average. The Imperial Almanac, published annually at Peking, with the seal of the Astronomical Board on the cover, is filled with much of the nonsense of judicial astrology. Mr. Barrow was informed by one of the European astronomers at the emperor's court, that "the calculation of eclipses, the times of new and full moon, the rising and setting of the sun, were intrusted to him and his colleagues; but the astrological part was managed by a committee of the Chinese members." This same person confessed that he was not very well qualified for his task, and expressed much gratitude on being presented with some copies of the Nautical Ephemeris, calculated for several years in advance.

The Chinese almanac, like many others of the kind in Europe, contains predictions and advice for every day in

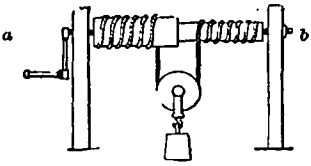
the year, and presents the same spectacle of the abuse of a little mystical learning to impose on the ignorant majority of mankind. It even gives directions as to the most lucky days for going out, or for staying at home; for shaving the head after the Tartar fashion, changing an abode, executing an agreement, or burying the dead. With this are mixed up, in the same page, a number of useful observations concerning natural phenomena pertaining to the season, though these remarks are interlarded with a number of vulgar errors as to the transformations of animals. In their first moon, which is about our February, the ice is said to melt, the wild-fowl to fly northward, and the foliage of trees and plants to be renewed: in the second, peach-trees blossom, swallows return, and there is much thunder and lightning: in the sixth, the weather grows hot, and the period of heavy rains comes on: in the ninth, wild-fowl return to the south, the chrysanthemum flowers, trees turn yellow and shed their foliage: in the twelfth, lakes and rivers are covered with ice, and the ground is frozen.* This of course relates to the latitude of Peking, nearly 40° north.

In the science of *mechanics* and *machinery*, the Chinese, without possessing any theoretical rules, practically apply all the mechanical powers, except the *screw*, with considerable effect. The graduation of their common steelyard must have acquainted them with the conditions of equilibrium in that class of lever, or the relations between the long and short arm, and the power and weight. They use it constantly for weighing, not only the commonest articles, but the most valuable, as gold and silver. The pulley is applied on board their vessels, but always with a single sheave, and apparently more for the purpose of giving a particular lead to the ropes, than with a view to the

* With these useful notices are mixed up very ignorant observations countenancing the grossest superstitions of the people.

mechanical advantage to be gained by it. The application of the tooth and pinion is exemplified in the representation of a rice-mill moved by water, at page 37 of Barrow's Travels. They seem to understand, in practice at least, that power and velocity vary inversely in machinery; as, for instance, that power is gained, or time, according as the moving force is applied either to the circumference, or the axis of a wheel.

It is remarkable that they should seem always to have possessed that particular application of the principle of the wheel and axle, by which the greatest power is attained within the least space; and, at the same time, with the greatest simplicity, as well as strength of machinery. The cylinder *a b* consists of two parts of unequal diameter, with a rope coiled round both parts in the same direction, the weight to be moved being suspended by a pulley in the middle. Every turn of the cylinder raises a portion of the rope equal to the circumference of the thicker part, but at the same time lets down a portion equal to the circumference of the thinner; and, as the weight is suspended by a pulley, it rises at each turn through a space equal to only half the difference between the span of the thicker and thinner parts of the cylinder. The action of the machine, therefore, is very slow; but the mechanical advantage is great in proportion, or, in other words, "power is gained at the expense of velocity," according to an invariable law of mechanics."



The over-shot water-wheel is used commonly in corn-mills, wherever the nature of the country affords streams available for the purpose. In cottages, a domestic mill was frequently seen by our embassies, composed of two

circular stones put in motion by a single man or boy, or sometimes an ass or mule, the power being applied at the end of a lever fixed in the uppermost stone.

Rice Mill.

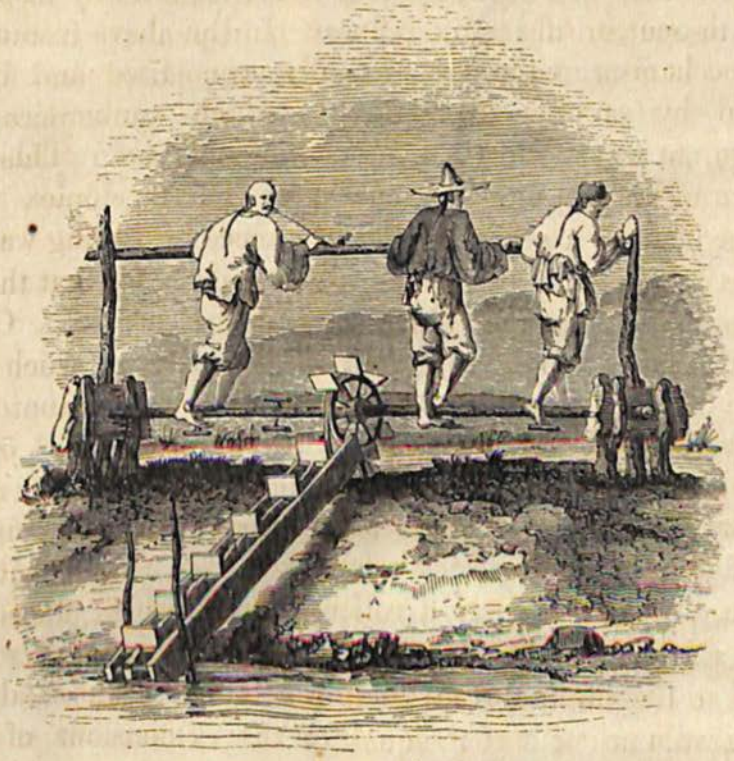
The juice of the sugar-cane is expressed in mills similar to those used in India, according to the description of Dr. Buchanan. It consists of two upright cylinders, which are put in motion by a buffalo yoked to a beam passing from

the top of one cylinder. The mill is fed by introducing the cane between the rollers, by which it is crushed and carried over to the other side. The expressed juice runs through a channel below into a large reservoir, whence it is transferred to boilers, and, being there sufficiently inspissated, is sent in tubs to the refiners. In the above instance the mechanism might be evidently economised and improved by causing the cylinder, which communicates motion, to turn *two* others instead of only *one*. This is known to be the practice in our West Indian colonies.

The Chinese excel in their contrivances for raising water in the irrigation of their lands, and it is probable that these inventions are nearly as old as their husbandry itself. One of them is an ingenious species of chain-pump, which we give here, as it is well described and figured in Staunton's Embassy.* The pump consists, in the first place, of a hollow trough or trunk, of a square make. Flat and square pieces of wood, corresponding exactly to the dimensions of the cavity of the trunk, are fixed to a (jointed) chain, which turns over a roller or small wheel placed at each extremity of the trunk. The square pieces of wood fixed to the chain move with it round the rollers, and lift up a volume of water equal to the dimensions of the hollow trunk. The power used in working this machine is applicable in three different ways: if the machine be intended to lift a great quantity of water, several sets of wooden arms are made to project from various parts of the lengthened axis of the roller, over which the chain and lifters turn. These arms are shaped like the letter T, and made round and smooth for the foot to rest upon. The axis turns upon two upright pieces of wood, kept steady by a pole stretched across them. The machine being fixed, men treading upon the projecting arms of the axis, and

* Vol. ii. p. 480.

supporting themselves by the beam across the uprights, communicate a rotatory motion to the chain, the lifters attached to which draw up a constant and copious stream



Chain-pump, from Staunton.

of water.* This manner of working the chain-pump is illustrated in the preceding cut, and is applied principally to raising water to small heights from rivers or canals: frequently to pumping out the holds of their merchant-vessels.

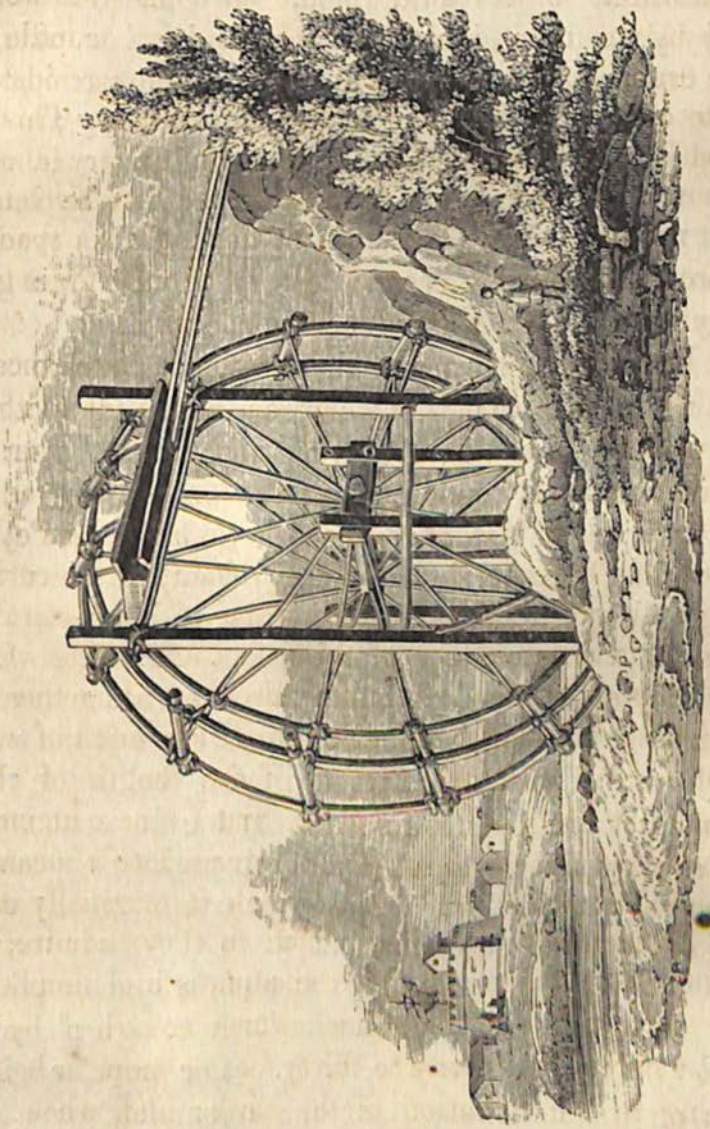
"Another method of working this machine," continues Staunton, "is by yoking a buffalo or other animal to a large horizontal wheel, connected by cogs with the axis of

* These lifters go up *through the inside* of the trough, and come down again above it, in a reversed position.

the rollers over which the lifters or boards turn. This mode was observed by the travellers only at Chusan. A small machine of this kind (in the third place) is worked merely by the hand, with the assistance of a trundle and simple crank, such as are applied to a common grindstone, fixed to one end of the axis of the chain-pump. This last method is general throughout the empire. Every labourer is in possession of such a portable machine—an implement to him not less useful (in rice cultivation) than a spade to an European peasant. The making of those machines gives employment to a great number of artificers."

But by far the most ingenious and useful contrivance for irrigating lands is that which our embassies met with on the river that flows down, with a rapid stream, from the ridge of mountains bounding the Canton province on the north (and called the *Meiling* pass), towards the Poyang lake and the Yang-tse-keang. The velocity of the current has worn away the banks, which consist of a loose soil, to the depth in some places of thirty feet and more. Here the chain-pump already described becomes altogether unavailable, as the weight and pressure of a column of water of that height, and the friction of the length of chain required, put it out of the question. But Chinese ingenuity has converted the strength of the stream into a means of overcoming the very difficulties which it originally occasioned; and one is at a loss which most to admire, the cleverness and efficiency, or the cheapness and simplicity, of the contrivance. The wheel, which is turned by the stream, varies from twenty to thirty feet or more in height, according to the elevation of the bank; and, when once erected, a constant supply of water is poured by it day and night into a trough on the summit of the river's side, and conducted in channels to all parts of the sugar-plantations which there chiefly occupy the lands.

The props of the wheel are of timber, and the axis is a cylinder of the same material; but every other portion of



Bamboo Water-wheel.

the machine exhibits some modification or other of the bamboo, even to the fastenings and bindings, for not a single nail or piece of metal enters into its composition.

The wheel consists of two rims of unequal diameter, of which the one next the bank is rather the least. "This double wheel," observes Staunton, "is connected with the axis by sixteen or eighteen spokes of bamboo, obliquely inserted near each extremity of the axis, and crossing each other at about two-thirds of their length. They are there strengthened by a concentric circle, and fastened afterwards to the rims; the spokes inserted in the interior extremity of the axis (or that next to the bank) reaching the outer rim, and those proceeding from the exterior extremity of the same axis reaching the inner and smaller rim. Between the rims and the crossings of the spokes is woven a kind of close basket-work, serving as ladle-boards," which are acted upon by the strong current of the stream, and turn the wheel round.

The whole diameter of the wheel being something greater than the height of the bank, about sixteen or twenty hollow bamboos, closed at one end, are fastened to the circumference, to act as buckets. These, however, are not loosely suspended, but firmly attached with their open mouths towards the inner or smaller rim of the wheel, at such an inclination that when dipping below the water their mouths are slightly raised from the horizontal position; as they rise through the air their position approaches the upright sufficiently near to keep a considerable portion of the contents within them; but when they have reached the summit of the revolution the mouths become enough depressed to pour the water into a large trough placed on a level with the bank to receive it. The impulse of the stream on the ladle-boards at the circumference of the wheel, with a radius of about fifteen feet, is sufficient to overcome the resistance arising from the difference of weight between the ascending and descending, or loaded and unloaded, sides of the wheel. This impulse is in-

creased, if necessary, at the particular spot where each wheel is erected, by damming the stream, and even raising the level of the water where it turns the wheel. The circumstance occasioned some obstacles to our progress up the stream towards the Meiling pass, as the water near such places rolled with the rapidity of a sluice. When the supply of water is not required over the adjoining fields, the trough is merely turned aside or removed, and the wheel continues its stately motion, the water from the tubes pouring back again down its sides. These wheels extend on the river Kân-keang, from the neighbourhood of the pass to a considerable distance down its stream towards the lake, and they were so numerous that we never saw less than thirty in a day. It is calculated that one of them will raise upwards of three hundred tons of water in the four-and-twenty hours. Viewed merely in regard to their object, the Persian wheel, and the machines used for raising water in the Tyrol, bear some resemblance to the one just described, but, as observed by Staunton, "they are vastly more expensive, less simple in construction, as well as less ingenious in contrivance."

It remains, under the head of this chapter, to say a word regarding the rules and principles which guide the Chinese in their *architecture*. Mr. Barrow has, with every appearance of probability, derived the shape of their roofs from the original use of the tent in their primitive pastoral state. Whatever the purpose to which a Chinese building may be destined, its roof invariably represents something of the catenary curve which a rope assumes when suspended between two points, and which therefore enters into the general contour of a tent, or a tent-like edifice. Owing to the same derivation, there is in the appearance of Chinese edifices a want of durable solidity, while the use of wooden columns in lieu of stone adds to the defect.

These columns are commonly thin in proportion to their height. As we refer the origin of the stone pillars in European architecture to the trunks of large trees, tapering in proportion as they rise from the ground, so the Chinese pillars may be traced to the original use of the bamboo, which in its slender proportions, and nearly uniform diameter throughout the whole length, assimilates to their columns at present.

The ornamental and honorary gateways (sometimes improperly termed triumphal arches) in the middle of Chinese streets, are of a similar construction. Their beauty arises wholly from the painting and gilding, and not from the proportions, which are weak and flimsy. The roof or summit, and what may be called the entablature, overweigh altogether the long and slender pillars beneath.* Every considerable house, as well as every temple, has a gateway before it constructed on the same general principles, and there is a high and broad passage through the centre, with a smaller one on either side. The same circumstances that may be ranked as drawbacks in general to Chinese architecture, fit it, at the same time, peculiarly to uses where only lightness is required. The ornamental pavilions in their gardens, often situated in the midst of sheets of water, and approached by bridges, are not alto-

* In Alexander's prints to our first embassy there is a sketch of one of these. The emperor occasionally orders a *pae-low* to be erected at the public expense, to transmit to posterity the meritorious name of some just magistrate, some officer who has been killed in fight, or even of some individual among the people who may have been distinguished by his own virtues or talents, or those of his progeny. These monumental gateways are generally constructed of stone or marble, but sometimes of wood. The height is often thirty feet or more. Under a projecting roof highly ornamented, and on a species of frieze above the four pillars, is always an inscription, setting forth the occasion of the edifice being erected, and the name and titles of the individual whom it commemorates.

Garden Pavilion.

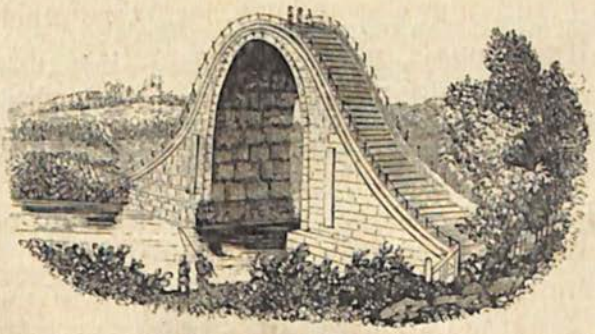
gether inelegant structures, affording at the same time a cool retreat in summer evenings, but occasionally much infested by mosquitos bred in the water.

Of the more solid architecture of the Chinese something has already been said in describing their city walls, and the great national barrier towards Tartary. They occasionally build detached towers or castles, to command important points, as that described in Lord Macartney's embassy, at the confluence of the canal with the Peking river. These partake exactly of the structure of the Great Wall, being built of brick on a foundation of stone, with a height of from thirty-five to forty feet. The entrance is an archway in the side of the tower, at some height from the ground, so as to be accessible only by a ladder or steps. Of their more considerable forts, by far the best specimens in the whole empire are those four or five, built at an enormous expense, at the entrance of the Canton river. In forcing the passage by these batteries in September, 1834, we found that a few rounds of thirty-two pound shot from his Majesty's ships 'Imogene' and 'Andro-

mache' beat in a large portion of the castellated summit of the stone wall upon the garrison, and likewise knocked several of the lower ports or embrasures into one; but the lowest portion, or foundation, of the walls was of such immense solidity, that some hours of battering would be required to demolish them, and the only effect we could perceive through our glasses was the scaling off of large masses from the face of the stone-work wherever the shot had struck. Great difficulty was found in demolishing these defences in 1856, on account of their vast solidity.

Of Chinese bridges, some have been very much exaggerated in the accounts of Du Halde and the missionaries, as appears from the later reports concerning the bridge at Foo-chow-foo, visited during the unsuccessful commercial voyage of the ship 'Amherst' in 1832, and since the war become familiar to our countrymen. This same bridge, which proved a very poor structure after all, had been extolled by the Jesuits as something quite extraordinary. A bridge of ninety-one arches, being in fact a very long causeway, was passed by Lord Macartney between Soo-chow and Hâng-chow, and near the lake called Tae-hoo. The highest arch, however, was supposed to be between twenty and thirty feet in height, and the whole length of the causeway half a mile. It was thrown across an arm of the lake, on the eastern side of the canal. The late Sir George Staunton observed a bridge between Peking and Tartary, built across a river which was subject to being swelled by mountain floods. This was erected upon caissons of wattles filled with stones. It appeared to have been built with expedition, and at small cost, where the most solid bridge would be endangered by inundations. The caissons were fixed by large perpendicular spars, and over the whole were laid planks, hurdles, and gravel. It was only in Keâng-nan that solid bridges

were observed to be thrown over the canal, being constructed of coarse grey marble, or a reddish granite. Some of the arches were semicircular, others the transverse section of an ellipse, and others again approached the shape of a horseshoe, or Greek Ω, the space being widest at top.* In the ornamental bridges that adorn gardens and pleasure-grounds, the arch is often of height sufficient to admit a boat under sail, and the bridge is ascended by steps.



Bridge for Foot-passengers.

All the stones of a Chinese arch are commonly wedge-shaped, their sides forming radii which converge towards the centre of the curve. It is observable that, according to the opinion of Captain Parish, who surveyed and made plans of a portion of the Great Wall, no masonry could be superior to it. The arched and vaulted work was considered by him as exceedingly well turned. The Chinese, therefore, must have understood the construction and properties of the arch long before the Greeks and Romans, whose original and most ancient edifices consisted of columns, connected by straight architraves, of bulk sufficient to support the incumbent pressure of solid masonry.

* The construction of a singular arch is described by Barrow, 'Travels in China,' p. 338.

CHAPTER XXI.

NATURAL HISTORY AND PRODUCTIONS.

Classification — European researches — Mr. Beale's aviary — Zoology — Mammalia — Birds — Reptiles — Fishes — Insects — Botany — Tea-plant — Timber-trees — The bamboo — Useful plants — Fruits — Flowers — Geological features — Abundance of coal — Volcanic symptoms — Earthquakes — Minerals — Metals.

AFTER a curious analysis of the great Chinese work on materia medica, which, although its name, *Pun-tsaou*, might literally imply that it was merely a *herbal* or history of plants, is in fact a classification of the chief productions of nature in the animal, vegetable, and mineral kingdoms, M. Rémusat comes to the following conclusion: "I think we may infer that natural history has engaged the attention of the Chinese from the remotest antiquity, and that it became in consequence an object of pursuit among neighbouring nations,* which caused it to make some progress. The mode of writing employed in those countries, leading the people who used it to establish *genera* and *orders*, furnished them with the elements of an excellent nomenclature, and put them in the way of classification. . . . . All that could be learned from more superficial inspection they have observed and recorded: all that demanded reflection or delicate research

* Nations using the same written characters, as Japan and Cochin-China.

they have remained ignorant of, or misapprehended. Superficial, however, as are the ideas they have collected, they constitute a scientific whole, which derives some value from the method to which it has been subjected. We conclude with a remark which is not destitute of interest to science itself: it is, that the Chinese and Japanese descriptions, when accompanied by the figures they refer to, may, with all their imperfections, enable us to distinguish the species we do, from those we do not possess, augment our knowledge of facts, diffuse some light upon the distributions of the natural objects of the ancient world, and consequently may be consulted with advantage even by *naturalists*, so long as circumstances shall continue to interdict European philosophers from countries so abundant in objects of natural history, and hitherto so little explored." In the seventeenth chapter allusion was made to the advantageous hints which the constitution of their written character had, from the earliest ages, afforded to the Chinese for a systematic nomenclature, and a rational classification of natural objects into certain genera or families, according to the most striking and obvious analogies that existed among them. The two hundred and fourteen roots, under which the whole language is arranged in Chinese dictionaries, include about one hundred and sixty, which serve at once (with the aid of other characters) as *component parts* in the written designations of all known objects in the animal, vegetable, and mineral kingdoms, and as *heads* under which they have been classed. "From this simple arrangement," observes M. Rémusat, "the very ideas appear which regulated the formation of the compound signs; which ideas frequently coincide with such as intelligent naturalists might acknowledge and adopt as a basis for their arrangements. This may be observed on a glance at even their modern dic-

tionaries, although the written language of China has undergone alterations of all kinds, and admitted many irregularities, which have affected the nomenclature of natural objects as well as other parts of the language. In turning over the leaves of the commonest of these works, we easily recognise genuine natural families, imperfect no doubt, and founded upon inaccurate views, imperfect observation, and an unphilosophical analysis; but discovering almost always a judicious design, with sound and sometimes ingenious conclusions."

Of the thirty roots, or radical characters, which constitute the genera or families above alluded to, *fourteen* include the animal kingdom. The *mammalia* are comprised under nine of these, viz. three families of *carnivora*, one of *rodentia*, and three of *ruminantia*, as oxen, sheep, deer: while the horse and swine are the types of two other families. In the details of the above arrangement there has been (as might be expected) much confusion and a want of discrimination, in classing together animals between which there was no real analogy, as well as separating others that were nearly allied: the ape and monkey tribes, for instance, are classed with the dogs; and numerous other examples might be adduced of the same kind. Birds, one of the most numerous class of animals in China, are all comprised in *one family*. Then come the tortoise and frog tribes under *two heads*. Fishes constitute *one family*, and improperly include the cetaceous and saurian tribes, as well as lobsters, crabs, and some of the molluscæ. The *fourteenth* family of animals, in the Chinese dictionary system, consists of insects.

This may serve to convey some idea of the notions which the Chinese have of classification, and show at the same time in what they have failed. Their vegetable kingdom is divided into eleven principal families. The

first comprises all herbaceous plants, which have a common type, and are very numerous: the second family has *wood* for its radical character, and includes all trees, as well as plants with a woody stem: the bamboo, on account of its importance in use, and the great number of its varieties, stands at the head of the fifth class, and includes under it all reedy plants. No less than *four* separate radical characters serve as the heads under which the corn-plants and esculent grasses have been arranged, and it follows of course that many repetitions and superfluous distinctions have taken place. The four together should have formed one natural family. The eighth family consists of leguminous plants, and has the bean for its type: the ninth comprises the cucurbitaceous, or gourd tribes: and under the tenth are included only about a dozen species and varieties of the alliaceous plants, as garlic, onions, and leeks. The importance attached to some of the smaller divisions no doubt arose from their having been principal articles of food from the first. The eleventh and last family consists of plants analogous to the hemp, which, from its consequence, has from the earliest times been designated by a simple and radical character.

The mineral kingdom has been classed by the Chinese lexicographers under five radical characters. The first family consists of gems, of which the famous *yu*, or jade, is the type: to these have been improperly added all factitious stones, with glass, amber, &c. The four remaining families are distinguished into stones, earths, salts, and metals. "It must be remembered," observes M. Rémusat very correctly of the system, "that this was not a methodical or systematic arrangement contrived by naturalists, in order to classify the objects they wish to describe; but a mere distribution of written signs, brought together according to their orthography, and classed by the makers

of dictionaries, solely with a view to facilitating and expediting the search for them. It cannot have escaped observation, that in this composition of signs there are certain scientific ideas whence this remarkable classification arises, as it were, spontaneously; and it may be asserted that there exists no other language in the world, the words of which, taken intrinsically, and quite independently of definition or accessary explanation, could afford even to the vulgar such just notions of the natural affinities of things. This results from the figurative nature of the characters, which has not been adequately appreciated; and we ought, perhaps, to give some weight to this circumstance, in the speculative comparisons we are often so fond of instituting between writing which is adapted to represent speech, and that which is immediately directed to the painting of ideas." * M. Rémusat proceeds to detail the classification of natural history in the great Chinese work on materia medica and therapeutics; but as this is a subject much less curious and interesting, and would besides exceed our limits, it must be omitted.

We may now proceed to a general consideration of such of the principal productions of China in the animal, vegetable, and mineral kingdoms, as have come under the notice and knowledge of Europeans; observing that, in a country whose interior is so little accessible to us, there must be a great deal that remains to be known and described. The animals, as well as vegetables, of China belong almost exclusively to the temperate zone, for the low average of the thermometer (whose annual mean, as far south as Canton, is little above 70°) and the cold winters are unfriendly to the existence of numerous tropical tribes that are found in corresponding latitudes of India.

* See paper on "the state of the Natural Sciences among the people of Eastern Asia," as given in the Asiatic Journal, vol. ix. p. 89.

There is no subject connected with China (we must premise) on which Europe is less indebted to the Romish missionaries than natural history. The Jesuits, to whom was intrusted the charge of surveying the country and constructing a map of it, performed their peculiar task admirably; but they lost an opportunity, which may perhaps never again occur, for investigating and describing the natural features of the empire. The studies of zoology, botany, and mineralogy had certainly not, in their time, attained the scientific advancement which they have since reached: but there is a peculiar poverty and indistinctness about the missionary notices of such objects as they met with in the several departments of the three kingdoms of nature.

The first European naturalist by profession, that seems to have visited the celestial empire, was Peter Osbeck,* who went to Canton in 1750, as chaplain to a Swedish East Indiaman, and recorded such discoveries as he could make within the limited range open to him at that port. He had the advantage of having been a pupil of the great Linnæus, and was enabled by circumstances to extend his researches to a considerable distance about the city, with little molestation. As he collected and described many plants from the vicinity of Canton and Whampoa, the remembrance of his zeal and success was perpetuated by Linnæus in the *Osbeckia Chinensis*, and an assistant named Toreen was complimented with the *Torenia Asiatica*. It is remarkable that these were the only persons who, unaided by patronage or the assistance of their governments, did anything material towards the elucidation of Chinese natural history up to the end of the last century. The situation of Europeans at the very best was so uninviting, or rather so miserable, in that country, that it required some resolution, and no small zeal in the cause

* For some account of Osbeck see Chinese Repository, vol. iii. p. 85.

of science, to encounter the obstacles and annoyances that met them at every step. The trading pursuits of by far the larger portion of persons resorting to Canton, and to the ports formerly open to the eastward, also prevented the extension of researches in natural history. Since the war, however, and the acquisition of four new points of intercourse, a great deal has been done to increase our stores in the department of botany.

The embassy of Lord Macartney formed an era in this subject, as in most others connected with China, being amply provided with intelligent and enlightened men who made the best of the opportunities which they enjoyed. In Staunton's Embassy and in Barrow's Travels there is much valuable information relating to the subjects of the present chapter. In the second volume of Staunton we find four considerable lists of Chinese plants: the first comprises those found between the shores of the Yellow Sea and Peking; the second, the plants observed near Peking and *Jĕ-ho* in Manchow Tartary; the third relates to the productions of Shantung and Keang-nân; and the fourth extends the observations down to Canton.* Had it not been for the foolish jealousy and apprehensions of the Chinese, the embassies might have been rendered much more instrumental than they were to the promotion of natural knowledge. The natives can so ill appreciate the motives of men who pursue science for its own sake, that they always couple with the eager researches of Europeans all kinds of fanciful apprehensions respecting the ulterior designs which they may entertain while surveying and examining the face of the country.

A most able and indefatigable naturalist was appointed to attend the mission of Lord Amherst in the person of Dr. Clarke Abel, but a tissue of misfortunes unhappily

* Embassy, vol. ii. pp. 165, 276, 435, 524.

frustrated his objects and hopes. Soon after his arrival in the country, a brain fever, brought on by exposure to a burning sun in the prosecution of his inquiries, confined him to his bed during a considerable portion of the journey, and in fact did all but bring him to the grave. Much, however, was effected by the activity of his numerous friends, who brought him all the specimens they could collect to enrich his herbarium and cabinet. The leisure of about a month, after reaching Canton, enabled him to classify and arrange his acquisitions in the way of plants and minerals, and to pack them for conveyance home. But the crowning disaster still remained. It is well known that the 'Alceste' frigate, in which Lord Amherst and his suite embarked for England, was wrecked in the straits of Gaspar on a sunken rock. There the fruits of so much diligence and care were irrecoverably lost, or, as Dr. Abel himself emphatically exclaimed—*ibi omnis effusus labor!* Some specimens fortunately reached England with Sir George Staunton, in a separate ship, and, among the few that escaped the wreck, one new plant received from Sir Joseph Banks the name of *Abelia Chinensis.*

Among the resident English in China who have devoted their attention to the natural history of the country, the names of Messrs. Beale, Reeves, and Livingstone are associated with most of the later acquisitions that have been made by us in zoology and botany. The botanic garden of the first of these gentlemen at Macao, though far from extensive in its limits, contained what in this country would be deemed a precious selection of trees and plants, and in fact served as the nursery in which some of the rarest productions of China were prepared for transmission home. In the garden was an aviary of curious or beautiful birds, and, as this was unique in its way, it may be described from the work of Mr. Bennett, who visited

China in 1833.* The aviary is forty feet in length by twenty in breadth, and probably thirty feet high: it is divided into two portions, having communications between them, which are usually left open, but capable of being closed if necessary. It is contiguous to one side of the house, the windows of which look through the lattice-work into the aviary; and the whole of the enclosure above and around has a similar lattice-work of fine wire, surmounted by a dome at the summit.

In the aviary large trees and a variety of shrubs are planted for the convenience of the feathered inhabitants. In the branches of the former are placed small baskets to assist as nests to those birds whose habits lead them to build in trees, and in the same branches many of the present inhabitants of the aviary have been born and reared. Near a tank, constantly filled with water, a quantity of artificial rock-work is constructed, forming an ornament to the aviary, as well as an asylum for birds of that class who are accustomed to such situations when at liberty, and who breed in the crevices. Every precaution is taken to prevent the ingress of rats round the aviary, the attacks of those animals having caused much destruction among the birds when the place was first erected. There are separate cages for enclosing the males of any of the species who may have their combativeness too highly excited. The punishment for such characters is in the first place solitary confinement, and should they not reform under that treatment they are finally dismissed the aviary as incorrigibles. It once happened, Mr. Bennett relates, during a total eclipse of the sun, that, as that luminary became over-

* Wanderings, &c., vol. ii. p. 50. This work contains a highly-interesting description of a *live* bird of paradise belonging to Mr. Beale: the species which Linnæus himself, strange to say, named *Apoda*.

shadowed, the feathered colony, if not in consternation at the event, was exceedingly perplexed at the rapid and untimely termination of the day, and all retired supperless to bed; they received, however, a second surprise at the briefness of the night; for, before they could be well asleep, the cocks crowed at the reappearance of the sun, and all again resumed their daily amusements and occupations.

We shall have to particularise hereafter some of Mr. Reeves's numerous contributions to natural history; but may notice in this place a paper of Mr. Livingstone,* addressed to the Horticultural Society, in which that gentleman reviews the means that had been adopted for enriching this country with the botanical productions of China, and states the remarkable majority of cases in which attempts to convey plants home had totally failed. It had been long the practice for individuals to purchase plants on the spot, and to carry them to England in the best manner that a long passage of four or five months at sea appeared to admit of. At a short distance above Canton, by the side of a creek or branch of the river, are a number of small nursery-gardens well known by the name of Fâ-ty, or the "flower-grounds." Each of these contains nearly the same collection of plants, formed to meet the usual demand of Europeans. It was here, Mr. Livingstone observes, that the purchases were made with no sparing hand, notwithstanding the general want of success which they had pretty uniformly experienced.

About the year 1804 a Scotch gardener was sent out from the royal gardens at Kew, for the purpose of enriching that splendid collection with the stores of China. Great pains were taken to supply him with the most judicious instructions, and the cabins for the reception of the plants were contrived with care. Yet, with every

* Indo-Chinese Gleaner, vol. ii. p. 126.

facility and advantage, it seems that, on comparing the plants actually sent with those which reached Kew alive and in a healthy state, this gardener was not more fortunate than private adventurers. It must be observed, however, that he did not attend the plants home, but remained in China to procure new ones. They accordingly fell victims to the ignorance or the neglect of those on board the ships, who either gave them too much water or none at all, and who exposed them to the spray of the sea in bad weather, or denied them a needful supply of fresh air in fine. The gardener himself, in the mean while, leading a solitary life in China, gave way to habits of intoxication, and became unfit for his business. Since that time no other attempt was for many years made; but it seems obvious that all the care and attention in selecting or preparing rare plants in China could be of little avail, unless they were under proper skill and management during the long voyage home. Mr. Livingstone calculates that not more than one plant in a thousand reached England in safety; but if we take only *half* the proportion, it will be very lamentable to those who appreciate the advantages of enriching this country with the useful or beautiful productions of foreign soils.

Since the war, however, great acquisitions have been made by the agency of Mr. Fortune, originally despatched to China by the Horticultural Society. He penetrated to the interior, and has successfully brought home many trees and plants to enrich our plantations and gardens. Among the former are the *Cryptomeria Japonica* and *Cupressus funerea;* and among flowers the *Dialœtra* and *Weigela*, both of them hardy and beautiful garden plants.

As animals are, for obvious reasons, more generally diffused over continents than plants, it follows that the number of cases in which the zoological productions of

China have been found peculiar to that country, or not known in other parts of Asia, are extremely rare in comparison with the botanical ones. It has been always remarked that in either instance, whether of plants or animals, they are such, in general, as characterise a temperate, and not a tropical climate. For this reason the larger and more ferocious descriptions of carnivorous quadrupeds are neither numerous nor common. In the forests of Yun-nân, to the south-west, the Bengal species of tiger is said to exist; indeed the numerous representations of that animal, and the stories connected with it in Chinese books, are proofs that it is sufficiently well known in the empire. At Canton, however, which lies so nearly in the latitude of Calcutta, it is quite a stranger, as well as in those provinces to the north through which our embassies passed. Some smaller animals of the same genus were seen by Père Gerbillon when he went with the emperor on his hunting excursion to the north of the Great Wall, as well as bears, and an abundance of deer. Lions are almost a fabulous animal among the Chinese. Specimens may have reached Peking from some of the neighbouring countries to the south and west; but the Asiatic lion is quite a different animal, and much inferior in power, to the African species. The woods of Southern China abound in a fierce and untameable, though small description of wild-cat. With a taste that is quite unaccountable to ourselves, this animal is considered by Chinese epicures as an exquisite species of *game*, and served up in stews at table, after being fed for some time in a cage. By way of a great compliment, some European gentlemen were asked to partake of the flesh of one of these wild grimalkins; but they of course declined the flattering invitation.

The domestic dog of China cannot be better described

than in the words of that accurate observer, Mr. White of Selborne: "My near neighbour, a young gentleman in the service of the East India Company, has brought home a dog and bitch of the Chinese breed from Canton; such as are fattened in that country for the purpose of being eaten. They are about the size of a moderate spaniel, of a pale yellow colour, with a coarse bristling hair on their backs; sharp upright ears, and peaked heads, which give them a very fox-like appearance. Their hind-legs are unusually straight, without any bend at the hock or ham, to such a degree as to give them an awkward gait when they trot. When they are in motion, their tails are curved high over their backs like those of some hounds, and have a bare place each on the outside from the tip midway, that does not seem to be matter of accident, but somewhat singular. Their eyes are jet black, small, and piercing; the insides of their lips and mouths of the *same colour*, and their tongues blue. The bitch has a dew-claw on each hind leg; the dog has none. When taken out into a field, the bitch showed some disposition for hunting, and dwelt on the scent of a covey of partridges till she sprang them, giving tongue all the time. The dogs in South America are dumb; but these bark much in a short thick manner like foxes, and have a surly savage demeanour like their ancestors." The account goes on to state that these dogs are "not domesticated by the Chinese, but fed in sties." This, however, is a mistake, for, although often eaten, they are very generally domesticated as guards, and a vigilant watch is called *shen-kow*, "an accomplished dog." The food on which they subsist is principally vegetable, and consists mainly of rice. This race of animal closely resembles the breed represented in the plates to the Arctic voyages, and seems to extend along the whole of northern Asia and America, being perhaps the original of the species.

Bears are quite common in the hilly parts of Shensy, west of Peking. They have often been seen in cages at Canton, whither they had most probably been brought from the westward, perhaps from Yun-nân or Sze-chuen. The paws of these animals, which abound in fat, are eaten by the Chinese as a delicacy. The country upon the whole is too well cultivated and thickly peopled to afford lodging and entertainment to many of the larger wild animals, however much they may have abounded originally. Similar reasons may account (besides climate) for the paucity of the quadrumanous tribes of apes and monkeys. Some of these animals exist on the island of Lintin, near the mouth of the Canton river; but it is most probable that they are descended from a few individuals of the

Chinese Camel-driver.

genus which may have got loose upon the island from the numerous junks and ships perpetually arriving from the seas to the south.

Dromedaries are much used as beasts of burthen be-

tween Peking and Tartary; but in China itself the reasons which cause human labour to supplant every other have prevented their being adopted; nor did we see one of these animals between Peking and Canton throughout the whole empire. Chinese horses are but rare, and of a very poor and stunted breed, probably from the same cause that renders their horned cattle so extremely diminutive—the deficiency of food and care. For their bulk, however, the horses are bony and strong, about the size of, or a little larger than, Shetland ponies, and at the best very rough and ill kept, with their fetlocks overgrown with hair. There is a white spotted species, often represented in Chinese pictures, and which might be considered as the produce of imagination had it not been verified by the actual observations of our embassies. The whole equestrian establishment of a mandarin, or person of wealth, is ragged and beggarly in the extreme: they have no idea whatever of either condition or neatness in the turn-out of their horses. Asses and mules are common in the north of the empire. The mules are generally of a good size, and said to bear a higher price than horses, as being capable of more labour on less food.

Of the common ruminant animals, the Chinese possess several species of deer, particularly a spotted kind, which is sometimes kept about their residences. Gerbillon describes a variety of antelope abounding on the borders of Mongol Tartary, and called by the Chinese *Hwâng-yang*, "yellow-goat." This animal is found towards the sandy desert of Shamo, together with vast numbers of hares and a peculiar sort of birds styled in Chinese "sand-partridges," perhaps without being a true variety of that species, for they are not very exact in their nomenclature. The sheep of China are the large-tailed kind, so common in Africa; and this extraordinary determination of fat to

the tail would almost appear to be the reason why they are not found to be such good stock as European sheep. As the Chinese themselves never use milk, cows are only met with near Canton, or Macao, of a peculiarly small breed; perhaps the very smallest of the ox tribe, as they sometimes do not exceed the dimensions of an ass; being at the same time of a clean and symmetrical shape, and without the hump common to the kine of India. The buffalo used in ploughing up rice-fields is also a very small species, not so large as our English cattle, with a skin of dark slate-colour, thinly covered with hairs. It has all the sluggish habits of the species, and in summer seeks refuge from the flies that torment its hairless hide, by plunging up to the nose in muddy tanks, where it rolls in the ooze and covers itself with a coating of soil. These ugly animals are rendered very tractable by those who use them in agriculture, and may generally be seen driven by a young boy, who will occasionally fall asleep upon the beast's back. It is probably in consequence of the derivation of the Budhist religion from India that most Chinese have a prejudice against eating beef of any kind, though they kill it freely for the use of foreign ships.

The domestic pig of China is well known in this country, where it has been introduced into our farm-yards, from being found an excellent and thriving stock on the homeward voyage. Pork is the only flesh-food that a Chinese of the lower ranks ever consumes; and even this is commonly substituted by salt-fish, as a cheaper aliment to mix with rice. The wild boar may be found in the half-reclaimed countries on the western borders, but not in Central China, or on the east coast, where tillage and population have arrived at their present height. Of the other wild pachydermatous tribes, the elephant is not at

present an inhabitant of China, unless it be in Yun-nân, nor is he used in that empire for purposes of either peace or war. The emperor has a few at Peking, but they are sent as tribute from Siam or elsewhere, and merely kept for curiosity and state. The one-horned rhinoceros of Asia is found in the forests of the extreme west and south. The horn is sometimes converted, by carving and polishing, into a sort of cup, the root or point of junction with the nose being hollowed out, while the summit of the horn serves as the pedestal or handle. The notion of its being a charm against poison was imported probably by the Mongols from India.*

Of rodent animals, the common rat attains sometimes to an immense size, and is well known to be eaten by the lowest orders of the Chinese. These creatures inhabit hollows in the banks of rivers and canals, and are taken at night by means of a lantern, which, being held to the mouths of their holes, causes the inmates to approach the entrance to reconnoitre; when the light dazzles their eyes

* There is a curious notice of the Siberian mammoth in Sir George Staunton's translation of the Chinese Embassy to the Tourgouths. "In the very coldest parts of this northern country," says the writer of the narrative, "a species of animal is found, which burrows under the earth, and which dies if it is at all exposed at any time to the sun and air. It is of great size, and weighs 10,000 *kin*. Its bones are very white and shining, like ivory. It is not by nature a powerful animal, and is not therefore very dangerous or ferocious. It is found generally in the mud upon the banks of rivers. The Russians collect the bones of this animal, in order to make cups, saucers, combs, and other small articles. The flesh of the animal is of a very refrigerating quality, and is eaten as a remedy in fevers." This account of the popular notions prevalent among the natives corresponds, as the translator observes, nearly with that given by Mr. Bell. He indeed qualifies it by adding that he gives it only as the report of the superstitious and ignorant; and he says nothing of the flesh having been actually eaten. More recent discoveries, however, have confirmed the truth of a portion of these relations; for not only bones, but the flesh of the entire Siberian elephant has been found undecayed amidst the ice and snows.

in such a manner as to lead to their easy capture. Mr. Reeves discovered a *glirine* animal, nearly allied to the bamboo-rat of Sumatra, with which it has been associated under the name of *rhizomys*. Mr. Gray describes it as a new genus, "in teeth and general appearance most nearly allied to *spalax*; from which it differs in its tail of moderate length, its exposed eyes and ears, and the more complex character of its molar teeth. It moreover lives upon, and not under, the ground, being found about bamboo-hedges, on the roots of which it principally subsists." To Mr. Reeves also we are indebted for the knowledge of two small carnivorous quadrupeds, new in zoology, and distinguished, since the arrival of the specimens, by the names *Helictis* and *Paguma*. The first is described by Mr. Gray as possessing a dentition resembling that of *gulo* or *mustela*, but differing from both those genera in some particulars of the upper carnivorous teeth. The entire length of the animal is twenty-three and a half inches, of which the tail measures eight, and it smells strongly of musk. The second animal is allied, in respect to its teeth, with the genus *viverra*; from which it is distinguished by the shape and inferior size of its skull, the space between the eyes being broader, and the nose both broader and shorter. The skin has the odour of civet.*

The ornithology of China is distinguished by some splendid varieties of gallinaceous birds, as the gold and silver pheasants, to which have been lately added the *Reeves's pheasant*, deserving of a particular description from Mr. Bennett. The longest tail-feathers approach the extraordinary dimensions of six feet, and, even in the spacious aviary of Mr. Beale, already described, it was found that the ends of these magnificent trains were broken by the bird's movements. As they come quite from the

* Proceedings of Zoological Society, 1831, p. 95.

north, it has proved extremely difficult to procure specimens, nor has the hen-bird been ever obtained. Four cocks were brought to Canton in 1830, and purchased for a hundred and thirty dollars, or about thirty pounds sterling. These furnished the specimens brought home by Mr. Reeves; the difficulty of procuring the females being attributed either to a determination on the part of the sellers to prevent the birds being bred, or to their imagining that the inferior plumage of the hens might render them less attractive to purchasers. This obstacle is the more to be regretted, as the high latitude from which the species are procured renders it likely that they might be propagated here in a natural state. Another description is called by Mr. Bennett the *medallion* pheasant, from a beautiful membrane of resplendent colours, which is displayed or contracted according as the animal is more or less roused. The brilliant hues are chiefly purple, with bright red and green spots, which vary in intensity according to the degree of excitement, and become developed during the early spring months, or pairing season of the year.

The country abounds in wild-fowl of all kinds, among which the immense flocks of geese, which during the winter months cover the Canton river, always excite the notice of strangers. They migrate to the north during the summer, and are distinguished, like all the tribe, by their gregarious habits; but the Chinese, without any apparent foundation in fact, make use of them as emblems of connubial attachment, and as such they are always carried in wedding processions. There is much more ground for this character in the instance of the *Yuen-yâng*, a teal of splendid plumage, usually called the "mandarin-duck," whose name is, with reference to the same conjugal quality, applied figuratively to two species of fine black

tea, which are generally put up in the same box, and used *together*; these are pekoe, and a superior kind of souchong. Mr. Beale's aviary afforded a singular corroboration of the fidelity of the birds in question. Of a pair in that gentleman's possession, the drake being one night purloined by some thieves, the unfortunate duck displayed the strongest marks of despair at her bereavement, retiring into a corner, and altogether neglecting food and drink, as well as the care of her person. In this condition she was courted by a drake who had lost his mate, but who met with no encouragement to his addresses from the widow. On the stolen drake being subsequently recovered, and restored to the aviary, the most extravagant demonstrations of joy were displayed by the fond couple.* But this was not all, for, as if informed by his feathered Penelope of the gallant proposals made to her shortly before his arrival, the drake attacked the luckless bird who would have supplanted him, beat out his eyes, and inflicted so many injuries as to cause his death. Specimens of these curious and handsome ducks have been brought to this country, and some that were placed in the Zoological Gardens have been successfully bred. The plumage of the female is as plain as that of the drake is ornamented; but the male, during four summer months, changes his feathers, and becomes as plain as his mate. This teal, unlike the rest of the palmipedes, generally roosts in high situations, upon trees or rocks, and his favourite position was over the windows of Mr. Beale's aviary.

Wild ducks are as numerous near Canton, during the winter months, as the geese. They abound especially in the interior, on those extensive shallow lakes through which the canal is carried; and the ingenious mode of catching them is very characteristic of the Chinese. Large

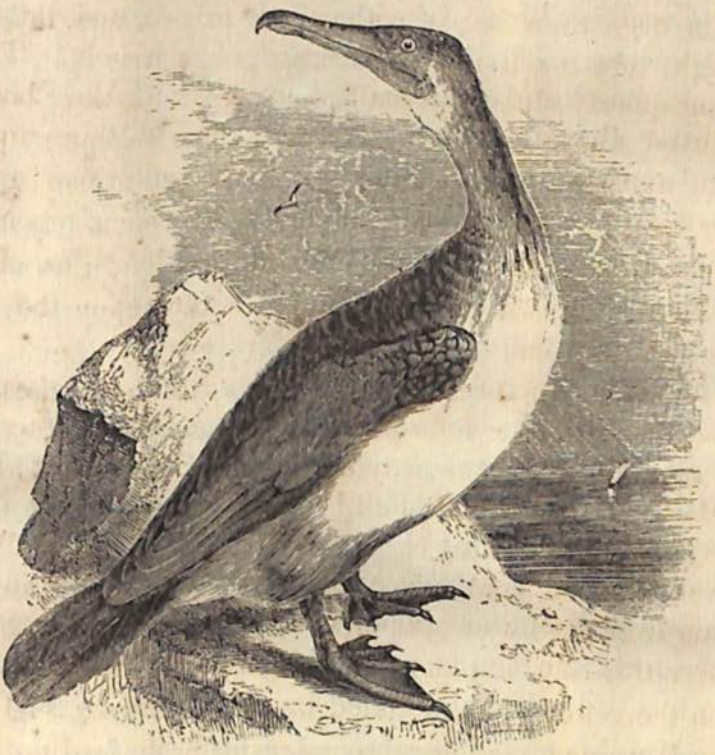
* Mr. Bennett's 'Wanderings,' vol. ii. p. 62.

hollow gourds are purposely thrown into the water in great numbers, and allowed to float about. The birds being at length accustomed to approach these with impunity, their captors disguise themselves by placing similar gourds over their heads, with holes to see and breathe through, very much in the manner of a helmet. Then wading quietly along the shallow waters, with their bodies immersed above the shoulders, they have nothing to do but to approach the birds gently, and pull them under water by their legs in succession. It has been remarked that the same practice has been recorded by Ulloa of the natives of Carthagena, in the New Word, upon the lake Cienega de Tesias.

The fishing-corvorant, employed on the same lakes, has been pictured in the folio plates to Staunton, and described as "a brown pelican or corvorant, with white throat; body whitish beneath, spotted with brown; tail rounded; irides blue; and bill yellow." While fishing, these birds are prevented from swallowing what they catch, by means of a ring over the lower part of the neck; but when the work is over this ring is removed, and they are allowed to feed upon the refuse. Sometimes, however, they are said to be so well trained as to need no restraint as to feeding whatever. A few of them were observed as far south as Keang-nân, in the neighbourhood of the Mei-ling pass.

A species of pelican has been seen on a group of rocks called the Nine Islands, lying about six miles north-east of Macao, but it is probably quite distinct from the variety that is used in fishing. Among the miscellaneous birds of China may be enumerated quails, often trained to fight; the common ring-dove, of which great numbers breed in the woods about Canton; and the peculiar crow of the country, which is marked with white about the neck. It has been noticed already that this bird is considered sacred,

either for some service that he is supposed to have rendered the present dynasty, or because he is the emblem of filial duty; from a notion, well or ill founded, that the young



Fishing Corvorant.

ones assist the old when they are disabled. In Europe the same character has been attributed to the stork, but the stork is, in China, considered as emblematical of long life. Figures of this bird, as well as of the pine-tree, are represented on the visiting tickets which are left at the new year; and they imply the wish that the person so complimented may have "many happy returns of the season." Among the other common birds of China, we must not omit a delicate species of ortolan, which appears in the neighbourhood of Canton about the time when the

last crop of rice is cut. As it feeds on the ears of grain, it is for that reason called the "rice-bird," in the same way that the term *wheatear* is applied to a similar description in the south of England. Mr. Gray, in his 'Zoological Miscellany,' has given the descriptive characters of twelve species of birds belonging to a large collection brought home by Mr. Reeves.

But it is time to quit this part of the subject, and to notice those reptiles of China that have come under observation; concerning which it is remarkable that the largest kind of saurians, as the crocodile and alligator, are unknown even as far south as Canton. Great numbers of the small lizard tribes are visible during the hot months, some of them infesting trees and shrubs, while others inhabit holes in rocks or old walls. Several fresh-water tortoises have been sent home, and described in the Zoological Proceedings for 1834; and two new genera of batrachians, or the frog kind, are noticed by Mr. Gray. Notwithstanding its situation, under the tropic, Canton is little infested by the venomous kinds of serpents. The species most dreaded is a slender snake between two and three feet in length, and called by the Chinese "the black and white," from being surrounded from head to tail with alternate bands of those colours. Mr. Bennett brought home an individual of this species, which had been killed after biting a Chinese on the foot, and causing his death in a few hours. The head was cut off by a countryman of the sufferer who came to his assistance, and who, having bruised it, applied it as a poultice to the bitten part. It may be questioned, as the narrator observes, whether the poison mingled with the mashed head may not have served to hasten the fatal termination.

Of fishes, a large collection of Chinese specimens has been lodged by Mr. Reeves in the British Museum. The

golden carp is one of the most distinguished kinds, and has long been known and propagated in Europe from the original specimens which were carried by the Dutch, first to Java, and thence to Holland. They ornament most of the gardens in China, being kept in artificial ponds, or large earthen and porcelain vessels, interspersed with tufts of mosses, or ferns over rock-work. It is sometimes necessary to cover these ponds with nets, to preserve the inmates from numerous king-fishers, which come early in the morning to prey on them. Of edible sea-fish, the best kind near Canton is a sort of rock-cod, called *Shek-pân*, which has exactly the meaning of that term. A flat fish, called *Tsâng-yu* by the Chinese, and "pomfret" by Europeans, is esteemed little inferior to the first. Soles are good and plentiful; but the fish most valued by native epicures is the sturgeon, partly because it is scarce, and partly on account of its gelatinous nature—a quality always valued in the dishes of the country. The Chinese stew made from this fish is so palatable as to have been introduced at the tables of Europeans. Some gastronome or other has observed that every country affords at least *one good dish.*

Among insects, it has been elsewhere noticed that the locust commits occasionally great ravages in particular districts, and rewards are given for its destruction. Some of the most poisonous tribes, as scorpions, are not met with at Canton; but the centipede, which the Chinese call by exactly the same name, *pĕ-tso* (hundred feet), is common. There is a monstrous spider that inhabits trees, attaining to such a size and strength as to enable it to devour small birds. A large species of *cicada* is common also among trees, emitting a loud and even stunning noise by the vibration of two flaps under the abdomen, supposed to be a call to the female. They generally keep up this

whizzing sound most constantly during the hot sunny days. Dr. Abel enumerates the *Scarabæus molossus*, the *Cerambyx farinosus*, as well as the mole-cricket, of a large size. At a mountain lying eastward of Canton, called Lo-fow-shan, there are butterflies of a gigantic size and very brilliant colours, so celebrated as to be alluded to in poetry, and a selection of the most splendid specimens sent annually to Peking. The *pĕ-la-shoo*, or wax-tree, affords nourishment to an insect which is supposed to belong to the coccus tribe, but has not been very exactly ascertained. In the 'Asiatic Researches' (vol. xiv. p. 182) is described an Indian insect which generates a featherlike secretion from its abdomen; this, dropping on the leaves, hardens there into a substance resembling wax. It is probably identical with the species observed by our first embassy on the coast of Cochin-China, which is figured in the first volume of Staunton,* and described as "of a curious structure, having pectinated appendages rising in a curve bent towards the head, not unlike the form of the tail feathers of the common fowl, but in the opposite direction. Every part of the insect was in colour of a perfect white, or at least completely covered with a white powder." The stem of the particular shrub, resembling privet, which was covered by the insects, was entirely whitened by a similar substance.

In the department of botany our limits will not admit of noticing any but the most remarkable or important plants and trees of China. At the head of these of course stands the tea-plant. The specimens brought from the *black* and *green* tea countries differ slightly in the leaf, the latter being a thinner leaf, rather lighter in colour and longer in shape than the other. But, besides this, the great difference in the preparation contributes to mark the distinctions between the two kinds of the manufactured article; for the Chinese themselves acknowledge that

* Page 353.

Insects producing Wax, from Staunton.

either black or green tea may be prepared from any tea-plant. The green teas are less subjected to the action of fire than the black, and therefore retain more of the original colour and peculiar qualities of the leaf; but they are at the same time infinitely more liable to suffer from time and damp. If the two kinds of tea-leaves are examined, after having been expanded in hot water, it will be observed that the black contain the stems of the leaves, as well as some portion of the stalks on which they grew, while the Hyson leaves have generally been pinched off above the leaf-stem. The black tea thus contains much of the woody fibre, while the fine green is exclusively the fleshy part of the leaf itself, which is one good reason why it should be dearer.

Chĕ-keang produces green tea; but the principal district is in Keang-nân, at the north-west extremity of a

range of hills dividing that province from Chĕ-keang, between the thirtieth and thirty-first parallels of north latitude. The tea-plant was first seen by us in the embassy, on the return from Peking, not far from this district, on the southern bank of the Yang-tse-keang, where the soil was composed partly of a micaceous sand. The black-tea country is in Fokien, between 27° and 28° latitude, on the south-east declivities of a range of hills dividing that province from Keang-sy. The tea-shrub succeeds best on the sides of mountains, where there is a small accumulation of vegetable soil. We observed it always elevated above the plains, in situations where the soil was a disintegration of sandstone or of granite, similar to the *habitat* of the single camellia, from whose seeds an oil is extracted. Dr. Abel hence infers that the hills at the Cape would afford the best situation and climate for the growth of tea; and it has been actually found to flourish on the higher parts of St. Helena. As a substitute for tea, the poorer Chinese sometimes use an infusion of dried fern-leaves, and we found these commonly sold for the express purpose near the Poyang lake.

The *camellia* bears the same name, among the Chinese, with the *tea-shrub*, and possesses most of its botanical characters. They in fact constitute two genera very closely allied, of which the distinctions, consisting principally in the seed, have been accurately noted by Dr. Wallich. The seed vessel of the tea is a three-lobed capsule, with the lobes strongly marked, and each of them of the size of a black currant, containing one round seed. When ripe, each of the three lobes bursts vertically in the middle, and exposes the seed. The capsule of the camellia is not lobular externally, but contains altogether three seeds, like that of the tea, though of a longer shape.

In the year 1834 it was discovered that the real tea-

Camellia oleifera.

plant was indigenous to the Company's territories in Upper Assam, bordering on the Chinese province of Yun-nân: and there now appears to be every reason for feeling certain that it may be cultivated, under proper management, with complete success, for commercial purposes, as well as for local consumption. An Assam tea company has been actually established, in consequence of the successful out-turn of some specimens of produce sent home to England.

While Lord Hardinge was Governor-General of India, he successfully established tea-plantations in the country of Kumaon, bordering on the Himalaya range. The author of this furnished at his request some native Chinese

from the tea-districts, together with the means of growing and manufacturing the article; and the exertions of Mr. Fortune since then have contributed greatly to the progress and success of the undertaking.

In our works of more than a century back, as in the 'Spectator,' Pope's poems,* &c., we always find the term Bohea applied to the best tea. Our principal trade was then at Amoy and Chinchew in Fokien; and the name, as before observed, is corrupted from the appellation of a celebrated mountain† in the black-tea districts of that province. The term is now applied in England to the lowest description of black tea, called by the Chinese *Ta-cha*, "large tea," from the size of the leaves, which are allowed to remain on the shrub until they are full-grown and coarse. It is a general rule that all tea is fine in proportion to the tenderness and immaturity of the leaves. In the green-tea districts the plants themselves are never allowed to reach a large size, but frequently renewed; while, in the black, both the plant and the leaves that form the last picking attain their full growth. The finest black tea, called Pekoe, consists of the spring buds as they begin to expand; and, in like manner, the tender leaflets of the green-tea plant are made into an expensive kind called *Loong-tsing*, or Hyson-pekoe, which is highly esteemed by the Chinese, but not brought to Europe, as it is so delicate and slightly fired as to spoil with the least damp. But we are anticipating the subject of tea as an article of *commerce*, which will come under a future chapter.

The *Laurus camphora*, one of the most remarkable

* "Where none learn ombre, none e'er taste bohea."

Rape of the Lock.

† Soong-lo, a general name for all *green* tea, is also the name of another mountain in Keang-nân, about 30° lat.

productions of China, as well as Japan, is a fine timber-tree, growing in the southern provinces to the height of fifty feet, and sometimes measuring twenty in circumference, with large branches eight or nine feet in girth. From the wood, which is highly scented with camphor, are obtained great quantities of that gum-resin. The process has been very exactly described by Dentrecolles. Fresh-gathered branches, cut into small pieces, are steeped in water for some days, and then boiled in a proper vessel, being continually stirred about with a stick until the gum begins to adhere in the form of a white jelly. The fluid is next poured into a glazed vessel, and, being left at rest for some time, is found concreted. The crude camphor is then purified by sublimation as follows:—a layer of dry earth, finely powdered, is laid at the bottom of a metal vessel; on this is placed a layer of camphor, and then a layer of earth, and so on alternately until the vessel is filled, and the series terminated by a layer of earth; over this is laid a covering of green mint. A second vessel is now inverted over the first, and luted on. The whole is then put over a regulated fire, and afterwards allowed to cool, when the camphor is found to have sublimed and attached itself to the upper vessel. The wood of the camphor-tree is very extensively used for chests and furniture, being proof against insects. As it works without any tendency to splitting, it is excellently calculated, and much employed at Canton, for building European boats. Another wood, that of the *Melis azedarach*, vulgarly called "sham-wood," is also a very common material among carpenters.

On the northern limits of the Canton province two species of fir, the *Pinus massoniana* and *lanceolata*, grow in abundance. The summits of the limestone cliffs, which border the river soon after its commencement to

the south of the Mei-ling pass, supply the large rafts of fir which are floated down with the stream. These are formed of smaller rafts united together by twisted osiers, and support the wooden dwellings of those who guide them along by means of long bamboo poles. The *Nân-mo*, a description of cedar which resists insects and time, appears to be exclusively used for imperial dwellings and temples. It was an article of impeachment against the minister of Kien-loong, who was put to death by the son and successor of that monarch, principally on account of his enormous wealth, that he had presumed to use this wood in the construction of his private palace. The *Tsze-lân*, also called *Mo-wâng*, or "king of woods," is much valued as a material of furniture, and somewhat resembles what we denominate rosewood. A common tree in the south is the *yâng-shoo*, or bastard banyan, being a variety of the *ficus religiosa*.

The same neighbourhood produces the *dryandra cordata*, from the seeds of which the Chinese extract a varnish for boats and coarser implements of use. Being insoluble in water, it is found very useful as a coating for tubs and basins, besides covering the paper umbrellas of the country, large quantities of which are exported to India. The finer varnish, however, is obtained from the *Tsiĕ-shoo*, or lacker-shrub, a species of *rhus*, from which the varnish distils like gum. It is said by the Chinese to be unwholesome to the manufacturers in a liquid state, and these poisonous qualities, which it possesses in common with many vegetable varnishes, are guarded against with great caution by the persons who collect it. They are said to work with masks over their faces, and with hands covered. The lackered manufactures of the Chinese are well known; and though the varnish is commonly used with a jet black or with red, it is capable of taking all colours.

The *Croton sebiferum*, from which the Chinese obtain their tallow, has been already noticed; and it has been observed that the use of vegetable substances was probably thus forced on them by the want of a sufficient number of the larger animals in their general economy. "The seed of the croton," as Staunton remarks, "in its external appearance, bears some resemblance to the berries of the ivy. As soon as it is ripe the capsule opens and divides into two, or more frequently three divisions, and, falling off, discovers as many kernels, each attached by a separate foot-stalk, and covered with a substance of a snowy whiteness, contrasting beautifully with the leaves of the tree, which in this season (autumn) are of a tint between a purple and scarlet." Another useful tree is the mulberry, most commonly used in the feeding of silkworms, though the same species differs in some degree from that of Europe in its growth. The leaves are smaller, of a lighter green, and much thinner. The fruit is produced, when required, in great quantities, but it is small, sweet, and insipid. The principal cultivation of the young tree for feeding silkworms is near Soo-chow in Keang-nân, not far from the sea, and in one of the finest climates of the world. Between that city and Hâng-chow, Mr. Barrow observed "plantations of the mulberry-tree were extended on both sides of the canal, and into the country beyond the reach of sight. They appeared to be of two distinct species: the one the common mulberry, *Morus nigra*; and the other having much smaller leaves, smooth and heart-shaped, and bearing a white berry about the size of the field-strawberry."

That gigantic grass, or reed, the bamboo, is so well known in many other countries, that it needs scarcely to be noticed here, except to remark the variety of uses to which it has been put by the Chinese. It is employed

in building scaffolding and sheds of all kinds; and the frame-work of their matted houses, for theatrical exhibitions, is run up with bamboos in a few hours. Some of the numerous varieties of this plant, particularly a black sort, serve as the materials of ornamental furniture. Longitudinal strips of the outer part form towing-ropes for boats; and of the small splinters baskets of all kinds are made. The inner portions, beaten into a pulp, form paper; and the young tender shoots, being the germs of the real stem of the plant, rising out of the ground like asparagus, are used for food in the same way as that vegetable, by boiling or stewing; or they occasionally make sweetmeats. The large tubes serve as pipes when the divisions at the joints have been removed; and for every purpose wherein strength combined with lightness is required, the hollow cylindrical shape, as in the feathers of birds, is the best adapted. The Chinese agriculturist would be entirely at a loss in numberless cases without the assistance of the bamboo, with which he constructs the fences of his enclosures, and many of the instruments of his husbandry. The siliceous concretion called *Tabasheer*, sometimes found in the interior of the joints, forms an item in their materia medica.*

The plant from which the pithy substance vulgarly called "rice-paper" is prepared was for many years a mystery in Europe. At length Mr. Reeves sent a specimen, supposed to be the plant, to the Horticultural Society, but it died shortly after; and it was not until the lapse of some years that Sir W. Hooker was able to designate the real plant as the *Aralia papyrifera*. This has been proved to be identical with the specimen first transmitted by Mr. Reeves; and since Mr. Fortune sent home

* The bamboo-stem blossoms but once, and then dies, like other grasses.

seeds in abundance it has become well known as a plant of handsome foliage. A number of useful plants are, as might be expected, common to both India and China, among which may be named the cotton-shrub and indigo-plant; the first of which provides the clothing of the mass of the people, and the last supplies the usual dye for it. Near the flat road between Peking and the Great Wall, Sir George Staunton observed, in the alluvial soil, a species of *polygonum* cultivated, and was informed that its leaves, macerated and prepared like those of the indigo, yielded a blue dye. This might be tried with advantage in other climates which are too cold for the growth of indigo.

A brief notice only can be taken of the remaining useful plants. The *smilax*, or China-root of commerce, commonly known as a sudorific, is used by Chinese doctors for a variety of complaints, and may be seen growing near Canton. That valuable medicine, rhubarb, grows to the northward, in the cold and mountainous province of Shensy; the colour is originally whitish, and it assumes its red appearance in drying. *Curcuma*, or turmeric, is used sometimes as one ingredient in colouring black tea green to deceive foreigners; and the root likewise forms an article of export from Canton. Ginger is commonly cultivated all through the interior, and sold green in the shops as a vegetable. A fine oil is extracted from the kernels of apricots to the north; and this is exactly the case among the inhabitants of Tartary, close to the Himmaleh range bordering on Bengal. The Chinese cassia, an inferior cinnamon, is grown in the province of Kuâng-sy, and largely exported in European ships. A species of seaweed, or fucus, found on the sea-beach in the neighbourhood of Macao, is used as a jelly. It is first steeped in fresh water, and hung up to dry; being then boiled in water, it acquires, on cooling, the consist-

ence and appearance of a jelly, and is used with various fruits to form conserves. The tobacco-plant seems to be grown nearly everywhere, but has different degrees of strength, varying probably according to soil and climate. To the north it is of a pale colour, and sold in the leaf, which is reduced to a coarse powder by the purchaser. To the south it is said to owe its occasional reddish colour to being steeped in a solution of opium. It is cut into fine shreds for use, by means of a plane, applied to the edges of a quantity of leaves strongly compressed. The cultivation of the poppy was forbidden in China altogether.

Some notice must be taken of the most remarkable fruits and flowers of China. Among the former there are three distinct species of the orange, as different as one sort of fruit can be from another of the same genus. The first is the China orange of Europe; the second is of a pale yellow colour, but very sweet, and with a highly aromatic rind, being the commonest and cheapest sort in the country;* the third, and perhaps best sort, has a deep crimson rind when ripe, quite detached from the fruit, the lobes of which are almost loose, with a hollow space in the centre of them. The whole has a flattish shape, sometimes four or five inches in diameter, and the loose skin, when broken, opens like a puff-ball, disclosing the juicy lobes surrounded with a kind of net-work of fibres. This has obtained at Canton the name of "mandarin-orange," which has been converted by botanists into *citrus nobilis*. The Chinese have besides several diminutive species of the genus *citrus;* one of which, called *Kum-kat*, makes a good sweetmeat when preserved whole. Small red limes are common, but they are not equal to

* Incorrectly called in England the mandarin orange, a term which properly belongs to the next, or third sort.

the lemon of Europe. The nearest approach to it is a curious result of horticultural ingenuity, by which a peculiar kind of citron is made to run entirely into rind, the whole terminating at the head in long narrow processes like fingers, whence it has obtained the appellation of *Fŏ-show*, "the hand of Fŏ." The odour of the mass of rind is very powerful and fine: but so entirely is this strange production the result of art operating on nature, that it does not appear a second time after the plant has been purchased.

The flat peach, a curious natural species, to which the Chinese give, on account of its shape, the name *Ping-taou*, or "cake-peach," is accurately figured in the Horticultural Transactions,* from the first specimen produced here in 1822, and thus noticed: "This fruit is of truly singular form, and perhaps will be best described as having the appearance of a peach flattened by pressure at the head and stalk; its upright diameter, taken through the centre, from eye to stalk, being $\frac{11}{16}$ of an inch, and consisting wholly of the stone, except the skin; that of its sides (which swell round the centre) is $1\frac{1}{8}$ inch, its transverse diameter being $2\frac{1}{4}$ inches." Some other curiosities of Chinese gardens are less natural, as their flower-pots containing stunted stems with full-grown fruit. The thick branch of a fruit-tree is deprived of a ring of bark, and the place covered round with a lump of rich loam. This is kept moist, and when the radicles have pushed into the loam the whole is taken off and placed in a shallow pot. The branches most loaded with blossoms are selected, and, the abscission taking place when the fruit is nearly ripe, they are in that state sold in pots.

When the dwarfing process is intended to be in imitation of old forest-trees, the branch which has pushed

* Vol. iv. p. 512.

radicles into the surrounding loam is separated from the tree, and planted in a shallow earthenware flower-pot of an oblong square shape. The pot is then filled with small lumps of alluvial clay, sufficient to supply a scanty nourishment to the plant, and water is added in a regulated quantity. The branches are represented by cutting and burning, and bent into shapes resembling those of an old forest-tree in miniature. Roughness is produced in the bark by smearing it with sweet substances that attract ants; and the plant in time acquires the desired smallness of leaf, and general stunted appearance. The elm is most frequently used for this purpose; nor do the dwarfs require any further attention, when once fashioned, than to have the young shoots kept down by clipping.*

Among the peculiar fruits of China, the *Lichi* has been naturalized in Bengal. Another of the dimocarpus sort, called *Loong-yen*, or "dragon's eye," is much smaller, and has a smoother skin. The *Loquat* is a fine fruit of the *mespilus* kind, not unlike an apricot in colour and appearance, but is commonly spoiled by being plucked while still immature. A specimen of the ripe fruit was exhibited by the Horticultural Society in 1825, from the gardens of Earl Powis. The *Wampee*, as it is called at Canton, has been sometimes compared to the gooseberry, which however it resembles only in size. The fruit, which grows in bunches on a good-sized tree, bearing leaves of a highly aromatic flavour, has a yellow skin (whence its name) enclosing a rather acid pulp that surrounds two or three smooth seeds of a greenish colour. Mangoes ripen in the south of China, but they are small and inferior, and the blossoms often fail in producing fruit; hence it is that, when the term "mango-flower" is applied

* See a description of the process, Hortic. Trans., vol. iv. p. 230.

to any person, it means that he promises more than he performs.

Grapes in the neighbourhood of Canton are often unsuccessful, the alternations of dry heat and rain being too much in excess, while occasional typhoons tear the vines to pieces. Lord Macartney's embassy found the vine cultivated largely on the borders of the river between Hâng-chow and the port of Ning-po, in latitude 30°, whence the fruit is carried in junks to Canton. As the vines spread from the bank, small upright posts are driven into the water at several feet distance, and the branches trained on them, thus gaining space over the shallow water. To the north are seen both apples and pears; but the latter are tasteless, and the former mealy and bad, though with a fine colour and smell. There is a species of date produced in Shantung, which, when dried like the French plum, has a flattish oval shape and a dark-red colour, with shrivelled skin and pleasant sweet taste. To the north also are walnuts; with two kinds of chesnuts, one the common European species, the other a dwarf kind, the nuts not larger than filberts, and only one in each capsule. The Chinese have besides the *Arachis hypogæa*, or ground-nut, which is extensively cultivated for the sake of its oil, the common food of their lamps. The seeds, although originally a part of the flower, and connected with it by filaments, ripen in a singular manner under ground. Previous to gathering them, the stems of the plants are cleared away with a hoe. The seeds are then taken up with the earth, and placed in a large sieve suspended between three poles, one man feeding the sieve, while another shakes it and separates the dirt. The arachis has been found to thrive in this country, when placed in a tan-pit with pines, each plant affording from twenty to thirty pods.

At the head of cultivated flowers the Chinese place the

Nelumbium, or sacred lotus, whether considered in regard to its utility or its beauty. It is often raised for mere ornament in capacious earthenware or porcelain tubs, containing gold-fish. Its tulip-like but gigantic blossoms, tinted with pink or yellow, hang over its broad peltated leaves, which in shape only, but not in size, resemble those of the nasturtium, the stalk being inserted near the centre of the leaf. When cultivated on a large scale for the sake of its seeds and root, which are articles of food, it covers lakes and marshes to a wide extent. The seeds, in form and size like an acorn without the cup, are eaten either green or dried, when they resemble nuts. The roots are sliced and eaten as fruit, being white, juicy, and of a sweetish and refreshing taste. Another highly esteemed flower is the *Olea fragrans*, consisting of minute florets of a white or yellow colour, growing in bunchy clusters, just where the leaves spring from the twigs. It flowers through a great part of the year; and in damp weather the fine odour of the blossoms is perceived at some distance. The fruit is a small olive; but it seldom appears on the trees, which commonly shed their flowers without fruiting. The slow growth of the shrub justifies the expression of *tardè crescentis*, applied by Virgil to its congener, the common olive. It is remarkable that a branch of this fragrant olive is one of the rewards of literary merit, and an emblem of studious and peaceful pursuits; while in Europe likewise the olive was attributed to Minerva, and became the emblem of peace. The capital of Kuâng-sy province is named Kuei-lin-foo, from the country abounding in plantations of the *kuei-hua*, or *Olea fragrans*. It is now found at Madeira.

The famous *Mow-tân*, or tree-peony, scarcely survives a year so far south as Canton, and never blossoms there twice: very large prices are sometimes given by the

Chinese for the plants which are brought to that place. A flower much cultivated is the *Chrysanthemum indicum*, which is valued for the variety and richness of its colours. The Horticultural Society is in possession of forty original drawings from China, depicting as many varieties of the flower. Upwards of twenty are now cultivated in this country; and some very beautiful specimens have been depicted in the Transactions.* The *Moo-le-hua* (*Jasminum grandiflorum*), a powerful smelling white flower, is sometimes worn in China, as well as all over the East, by women in their hair, and has given rise in the former country to a song, of which the music may be found in Barrow's Travels. The *Choolân* (*Chloranthus inconspicuus*), a small greenish-yellow blossom resembling strings of beads, is used in scenting the tea that bears its name. As a wild plant, the *Myrtus tomentosa*, or downy myrtle, of which the flowers, when they first expand, are of a rose-colour, grows in great beauty on the hills of the Canton province and at Hongkong; as does also, in Keâng-sy, the *Eugenia microphylla*, a beautiful myrtle-looking plant that covers the sides of every hill, and of which the thick terminal clusters of berries are eaten as fruit.

For such scattered lights as we possess of the geology and mineralogy of the Chinese empire, we are principally indebted to the observations of the two embassies of 1793 and 1816; and it may therefore be as well to give a summary of these observations in the order they were made, from the first landing of the missions in the Peking gulf to the termination of their journeys at Canton. That portion of the most northern province that extends from the mouth of the Peiho to Tien-tsin, where the canal terminates, bears every mark of a recent and alluvial

* Vol. v. p. 152.

formation. There is not a pebble to be seen; but the whole flat consists of a mixture of clay and sand in strata alternating with beds of shells. So little is the country raised above the ordinary level of the river which flows through it, that there seems some difficulty in confining the latter within its bed. "If the obstacles," observes Staunton,* "that deflect a river's course consist of rocks or elevated compact ground, no subsequent accidents are likely to change the bed once formed; but if the waters flow through a country nearly level, and between banks of so loose a mould as to be incapable of resisting a partial swell or rapid motion of the river, it will probably on such occasions form new and circuitous channels for itself. It did so in the present instance, and to a degree of inconvenience which appears to have induced the government to take pains for confining it within its usual bounds; and, accordingly, extraordinary quantities of earth have been placed along its sides, in order immediately to fill up any breach which from time to time might be made in them. There are mounds of this kind in the form of truncated wedges all along the banks of the Peiho, which may have partly been composed of mud collected from the river's bed. At present the banks of the river are higher than the adjacent plains. Those plains extend as far as the eye could reach; and the windings of the river through them made the masts of the vessels sailing on it appear throughout the country as if moving over the fields, in every direction, while the water lay concealed."

Between Peking and the Great Wall, on the way to Jĕ-ho, or the "hot springs," lying to the north-east in Manchow Tartary, our first embassy observed, for the only time in China, a *chalky* appearance,† and geological

* Embassy, vol. ii. p. 17. † Ibid. p. 173.

features approaching those familiar to us in the south-east of England. In the whole distance between Peking and Canton no secondary formation so recent as chalk has been met with; and at the latter place a cargo of English flints in ballast always finds a market, being used as a material in the manufacture of coarse glass. The plain on which Peking itself stands is an alluvial flat; but the country rises rapidly into mountains towards the west, where the Chinese are said to obtain great quantities of coals for the use of the capital. These coals, from the specimens supplied to the last embassy, Dr. Abel supposed to be a species of graphite, which, from its analysis, has been found allied to Kilkenny coal. Of the higher mountains bordering on Tartary, those who accompanied Lord Macartney observed that the lowest stratum was of sand and sandstone; the next above was coarse-grained limestone, full of nodules, and of a blue colour; this was covered by an irregular and very thick layer of indurated clay, of a bluish and sometimes of a brown-red colour, communicated by iron, which in places was so abundant as to give the clay the appearance of ochre. In some parts were perpendicular veins of quartz, intermixed with granite at the tops of the mountains.

When the embassies entered on the canal, they met with nothing but a succession of swamps and lakes, through the provinces of Shantung and the northern part of Keang-nân, affording cultivation on a large scale to the *Nelumbium*, or lotus, and the *Trapa bicornis*. This is the country which, from the earliest ages of Chinese history, appears to have been subject to disastrous inundations, which we have supposed it was the merit of the great Yu to reduce and regulate. The floods are at present perpetually renewed in a greater or less degree, by the bursting, from time to time, of the banks and

dikes of the Yellow River—a destructive, rather than beneficial or useful stream, which, as already observed, the late emperor himself styled "China's sorrow." On reaching Nanking, and ascending the course of the Yang-tse-keang, the country rapidly improves, the swamps disappear, and the shores consist of a bluish-grey compact limestone, under a layer of vegetable mould. The islands in the river, on the authority of Dr. Abel, are an agglomerate composed of round and angular fragments of quartz, limestone, and felspar-porphyry, united by a thin argillaceous cement, or buried in sandstone. On reaching the Poyang lake, the mountains called Leu-shan, which border it on the north-west, were found to be composed of granite, containing milk-white felspar, grey quartz, and greyish-black mica. Occasionally appeared mica-slate, with but little quartz. Dr. Abel observes, "very large perfect crystals of felspar were found in the same place, many of them three or four inches in the largest diameter, and often conjoined with masses of mica in nearly equal dimensions."

At a short distance from the Poyang lake some shallow pits were seen of a species of coal which, from its imperfect carbonization and the evident traces of vegetable substance in its composition, resembled the Bovey coal of Devonshire. The alluvial character of the spot where the latter is found bears some resemblance to the neighbourhood of the lake, which receives the drainings from the granite mountains in the neighbourhood. It has been before stated * that some of the materials of Chinese porcelain are obtained near the Poyang; and in this circumstance there is a further similitude, for it is observed by Dr. Kidd, "an inferior kind of porcelain-earth is found in that part of Bovey in Devonshire which is near

* Chap. XVIII.

the London road. It is met with not much below the surface of the earth; and, from a consideration of its situation and the attendant circumstances, appears evidently to be a natural deposition of earthy felspar. Whoever considers the swampy nature of that heath, the appearances observable on its surface, and its relative situation to the adjoining granite hills, may easily be convinced that it is derived from the detritus of these, washed down and deposited by water; for this heath is as it were a natural basin which must necessarily receive whatever is brought down from the adjoining high ground; and its surface, in a great measure, consists of a white sandy quartz and occasional crystals and fragments of felspar, that evidently correspond with the quartz and unaltered felspar of the neighbouring granite."

On ascending the river Kân-keang, towards the Mei-ling ridge, the banks were observed to be composed of the old red sandstone resting on granite; and on reaching a point called *Shĕ-pa-tân*, or "the eighteen rapids," the rocks that obstructed the stream consisted of granite and a dark-coloured compact slate. The rapidity of the stream seemed to have worn away the superincumbent sandstone into a narrow channel that resembled a deep ravine, shaded by the pines that grew in the dark red soil on either hand. From thence the acclivity quickly increases up to the pass through the ridge, of which the substance was examined, and found to consist of limestone, under an argillaceous sandstone of compact structure. The road was cut with much labour through the narrowest part, being not more than forty or fifty feet in length, as many in height, and about twenty broad. The rock was distinctly and horizontally stratified; the sandstone was small-grained, its fresh fracture having almost the dark grey colour of clay; but where long

exposed to the weather it was reddish. On descending the southern side of the ridge, the road was lined with natural pyramidal heaps of limestone, which still preserved the remains of their original horizontal stratification.

Soon after passing the city of Nanheung-foo at the foot of the ridge, Dr. Abel observes that the hills which formed the banks of the river exhibited a breccial structure at their base, covered with beds of ferruginous clay, which gave to the soil a remarkable redness. Bricks were making of this, which came from the furnace of a blue colour, and such is the hue of all Chinese bricks from Peking to Canton. Dr. Abel disproved, by experiment, the previous notion that the blue brick is only sun-dried, and found that a portion of the red clay actually became of that tint on being subjected to the fire. In descending the river towards Canton, the embassies passed a cliff some hundred feet in height, which consisted of greyish-black transition limestone, containing deep fissures and natural caverns, some of which have been converted by a very little labour into temples and adyta devoted to the goddess Kuân-yin. Over the front of the principal cavern hangs an enormous stalactite formed by the percolation of water charged with carbonic acid through the rock above.

The dark-grey marble used at Canton is of the coarsest grain, and unsusceptible of a fine polish.* In the shops abound large quantities of striated gypsum, or alabaster, which works very easily into small figures. This substance, after being converted by burning into plaster of

* There is one species valued on account of the curious resemblance which the figures on its polished surface bear to trees, animals, &c. But this is said to come from Yun-nân. There is reason to suppose that the figures are sometimes artificial, from their too close resemblance to particular objects.

Paris, is used in combination with oil as a cement for the seams of boats and junks. The Chinese turn it to various other purposes, honest and dishonest. It is sometimes used as a tooth-powder; but the strangest application of it is as a *gruel* in fevers, under the idea of its being cooling. Perhaps the persuasion of the wholesome, or at least innocuous qualities of powdered gypsum renders them less compunctious in using that substance to adulterate pounded sugar-candy, which it closely resembles; and we shall see, in a future chapter, that it serves as one ingredient in converting black teas, which come down damaged to Canton, into what are sold as *green*.

The coal at Canton is far from pure; it contains a small proportion of bitumen, abounds in sulphur, and leaves much earthy residuum. The coal-mines by the river were observed to be in the sides of cliffs, rising up directly from the water, and worked by driving a level from the river into the side of the mine, the coal being laden in boats from the mouth of a horizontal shaft. The character given by Du Halde of the coal to the northward throughout the empire is much the same. He says, the fires made from it are difficult to light, but last a long time. He adds, that "it sometimes yields a disagreeable smell, and would suffocate those sleeping near it, but for a vessel of water, which attracts the fumes, so that the fluid becomes charged with them." This may be the sulphuric acid, for which water has a strong affinity. There can be no doubt of the abundance of coal throughout China, nor of its extensive use; points which were both proved by the large supplies furnished to the boats of the embassy, and the heaps exposed for sale. The application of this mineral as fuel, so long ago as the end of the thirteenth century, is shown by the following

accurate description of Marco Polo :—He says, "there is found a sort of black stone, which they dig out of mountains, where it runs in veins. When lighted it burns like charcoal, and retains the fire much better than wood; insomuch that it may be preserved during the night, and in the morning be found still burning. These stones do not flame, excepting a little when first lighted, but during their ignition give out a considerable heat." *

From the neighbourhood of Canton to the sea, the rocks are composed of red sandstone resting on granite, until, on reaching the clusters of islands that line the coast, these are found to consist of a coarse granite only, crossed by perpendicular veins of quartz. Over the irregular surfaces of the islands, and at the summits of the highest, are strewn immense rounded boulders of the same rock. They are generally imbedded in the coarse earth, which is a disintegration of the general substance of the islands, and, as this is washed from under them, roll down the steep declivities until they reach a level space, and commonly stud the sandy margins of the islands with a belt of piled rocks, some of them many tons in weight. The scenery of these islands has been often compared to that of the Hebrides, and is quite as barren. A single instance of trap formation was detected by Dr. Abel, at an island visited by the 'Alceste' frigate with Lord Amherst's embassy on board, and destined one day to be a British colony under the name of Hongkong. "I examined," he says, "the rocks by the waterfall, and found them composed of basaltic trap, exhibiting in some places a distinct stratification, in others a confused columnar arrangement." † Close to this was a mass, insulated by the sea-water, composed of two kinds of

* Quarto edition, page 273.

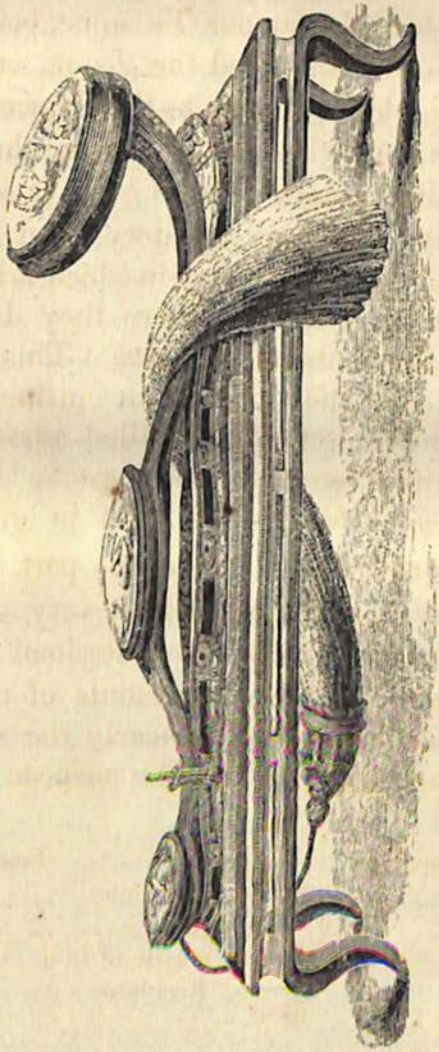
† Abundance of trap rocks have been since found at Hongkong.

rock, granite and basalt, whose junction exhibited some curious facts. A dike of basalt passes upwards through the granite, and spreads over it. It is not in immediate contact with the granite, but separated by three narrow veins which interpose, and follow the dike through its whole length, the width of each not exceeding four inches, while that of the basalt is as many feet. The veins were of three kinds; first, granite and basalt mixed together in a confused manner; second, pure felspar: third, a sort of porphyry composed of very perfect crystals of felspar in a basaltic base. Some islands near Chusan exhibit basaltic rocks, and many more would probably appear on further investigation.

No active volcano is known to exist in China; but the line of mountainous provinces which form the western side of the empire, from Yun-nân to near Peking, exhibits what are generally considered as slumbering volcanic symptoms, such as wells of petroleum, salt and hot-water springs, gaseous exhalations, and occasionally severe shocks of earthquake. In Yun-nân there are salt-water wells near Yaou-gan-foo, in latitude 25° 35′; the south-west part of the adjoining province of Sze-chuen abounds in the same: in Shen-sy, near the city of Yen-gân-foo, in latitude 36° 40′, there is found petroleum; and in Shân-sy there are hot-water springs, as well as jets of inflammable gas, said to be employed for the purpose of distilling saline water procured from wells in the neighbourhood. This connexion of the gaseous exhalations with saline springs has been considered as a corroboration of the fact, the same having been observed in Europe and America.* The Chinese are said to convey the gas to the place where it is consumed by bamboo pipes. These are terminated by a tube of clay to resist the action of

* De la Beche, Geology, p. 132.

the fire; and the combustion thus produced is so intense that the caldrons are rendered useless in a few months. A very severe and destructive earthquake occurred in Sze-chuen, during 1817, and another of the same descrip-



Joo-ee, formed of Jade

tion is remembered at Peking, as having happened in 1731. The slight shocks which have been only just perceived in the neighbourhood of Canton were probably nothing but distant vibrations, communicated from some

portion of that line of active volcanoes which extends from the north-east extremity of Asia through Japan, Loo-choo, Formosa, Luconia, and other islands, to Java.

We may conclude with noticing some of the principal minerals of China not already described. At the head of these must be placed the famous *Yu* stone, being nephrite or jade, of which was composed the *Joo-ee*, or emblem of amity, sent by the late emperor to the Prince Regent.

The colour is a greyish white, passing through intermediate grades into a dark green.* "It is semi-transparent and cloudy, fractures splintery, and is infusible without addition." † The country in which it is principally found is said to be Yun-nân, where they discover it in nodules within the beds of torrents. This stone is so extremely hard, that the Chinese, in cutting it, use their powder of corundum, sometimes called adamantine spar, as they do in cutting lenses for their spectacles from rock-crystal.‡ The *corundum* is met with in granitic rocks, of which it is sometimes a component part. Its specific gravity is about 4, and its hardness very great. From the subjoined analyses, stated in centesimal ratios by Dr. Kidd, it appears that the constituents of corundum, as well as its specific gravity, are nearly the same as those of *emery*, which is used for the like purpose by European lapidaries.§

Chinese corundum.		*Emery.*	
Alumine	84·0	Alumine	80
Silex	6·5	Silex	3
Oxyde of iron	7·5	Oxyde of iron	4
	98·0	Residuum	13
			100

* A very large specimen may be seen at the British Museum, cut into the form of a tortoise, and found imbedded in the banks of the Jumna.

† Dr. Abel.

‡ This is very abundant, and the best comes from Fokien.

§ Mineralogy, vol. i. p. 153.

As China abounds in the primitive rocks, it is consequently rich in metals. Gold is obtained chiefly in the native state from the sands of the rivers in Yun-nân and Sze-chuen, near the frontiers of the Burmese country, which is well known for the quantity of gold it produces. What is called the Kin-shâ-keang, or "Gold-sand River," is a portion of the great Keang in the earlier part of its course; and the largest amount of the precious metal is said to come from Ly-keang-foo, near that river, and Yoong-châng-foo, on the borders of Ava. In Yun-nân are also worked silver-mines; and indeed the great quantities of silver brought to Lintin for many years past, to be exchanged for opium and exported to India, have proved that there must be abundant sources in the empire. Ordinary copper, whence the base metal coin of the country is made, comes from Yun-nân and Kuei-chow. A good deal of this is called *Tze-lae*, or "natural," as being found in the beds of torrents. An abundance of *malachite*, or green copper ore, is obtained near the great lake in Hoo-kuâng, and is pulverized by the Chinese for green paint. The famous *pĕ-tung*, or white copper, which takes a polish not unlike silver, is said to come exclusively from Yun-nân. A considerable quantity of quicksilver is obtained in Kuei-chow; and there is a rich mine of zinc in *Hoo-pĕ*.

CHAPTER XXII.

AGRICULTURE AND STATISTICS.

Climate and meteorology — Typhoons — Discouragements to agriculture — Objects of cultivation — Absence of pasture — Allotment of wastes — Manures — Irrigation — Rice-cultivation — Encouragements to population — Obstacles to emigration — Census — Positive checks — Land-tax — Revenues partly in kind — Grain-junks — Salt-tax — Taxes on transit — Expenditure — Deficiency of revenue — Existing abuses.

IN connexion with the subject of this chapter, it may be as well to make some general remarks on the climate and meteorology of such parts of the country as have come under the observation of Europeans. A distinguishing feature, the unusual *excess* in which heat and cold prevail in some parts of the empire at opposite seasons, as well as the low average of the thermometer round the year, in comparison with the latitude, has been already noticed and explained as resulting, according to the investigations of Humboldt, from the position of China on the eastern side of a great continent. Although Peking is nearly a degree to the south of Naples—the latitude of the former place being 39° 54′, of the latter 40° 50′—the mean temperature of Peking is only 54° of Fahrenheit, while that of Naples is 63°. But as the thermometer at the Chinese capital sinks much lower during winter than at Naples, so in summer does it rise somewhat higher: the rivers are said to be frozen for three or four months together, from December to March; while during the

Cave of Camoens, Macao.

last embassy, in September, 1816, we experienced a heat of between ninety and one hundred degrees in the shade. Now it is well known that Naples and other countries in the extreme south of Europe are strangers to such a degree of long-continued cold, and not often visited by such heats. Europe, observes Humboldt, may be considered altogether as the western part of a great continent, and therefore subject to all the influence which causes the western sides of continents to be warmer than the eastern; and at the same time more temperate, or less subject to *excesses* of both heat and cold, but principally the latter.

The neighbourhood of Canton, and of other cities on the coast, to the sea causes this tendency to be greatly modified; and indeed the climate of the larger portion of the empire seems to be, upon the whole, less subject to

extremes than that of the capital. Taking it all the year round, and with the exception of some oppressive heats from June to September, it may be questioned whether a much better climate exists anywhere than that of Canton and Macao; the former place being as low as latitude 23° 8′ north, and the latter about a degree to the south of it. The mean annual temperature of those places is what commonly prevails in the 30th parallel. It is surprising to contrast their meteorological averages with those of Calcutta, a city which stands very nearly in the same latitude. The following table was the result of observations made at Canton during a series of years

	Thermometer.					Mean Height of Barometer.	Average fall of Rain in Inches.	
	Mean Maximum.	Mean Minimum.	Mean Temperature.	Range				
				From	To			
January .	57	45	51	65	29	30·23	0·675	
February.	58	45	51·5	68	33	30·12	1·700	
March .	71	60	65·5	79	45	30·17	2·150	
April . .	76	69	72·5	84	59	30·04	5·675	
May . .	78	73	75·5	86	69	29·89	11·850	
June . .	84	79	81·5	89	74	29·87	11·100	
July . .	88	84	86	94	81	29·84	7·750	
August .	86	83	84·5	90	79	29·86	9·900	
September	84	79	81·5	88	75	29·90	10·925	
October .	76	70	73	85	60	30·04	5·500	Total
November	68	61	64·5	79	48	30·14	2·425	Rain,
December	63	52	57·5	69	40	30·25	0·975	70·625
Annual Means	74·1	66·7	70·4	81·3	57·6	30·03		

(the average fall of rain was taken from a register kept, for sixteen years, by Mr. Beale at Macao), by which it appears that about 70½° of Fahrenheit is the average

temperature of Canton and Macao, and that the months of October and April give nearly the mean heat of the year. The total fall of rain varies greatly from one year to another, and has sometimes been known to reach ninety inches and upwards. Vegetation is checked in the interval from November to February, not less by the *dryness* than by the *coldness* of the atmosphere; the three winter months being known sometimes to elapse with scarcely a drop of rain. The north-east monsoon, which commences about September, blows strongest during the above period, and begins to yield to the opposite monsoon in March. About that time the southerly winds come charged with the moisture which they have acquired in their passage over the sea through warm latitudes; and this moisture is suddenly condensed into thick fogs as it comes in contact with the land of China, which has been cooled down to a low temperature by the long-continued northerly winds. The latent heat given out by the rapid distillation of this steam into fluid, produces the sudden advance of temperature which takes place about March; and its effect is immediately perceptible in the stimulus given to vegetation of all kinds by this union of warmth with moisture.

With the progressive increase of heat and evaporation those rains commence which tend so greatly to mitigate the effects of the sun's rays in tropical climates. In the month of May the fall of rain has been known to exceed twenty inches, being more than a fourth of all the year, and this keeps down the temperature to the moderate average marked for that month; while, in Calcutta, there is no portion of the year more dreaded than May. At length the increasing altitude of the sun, which becomes just vertical at Canton about the solstice, and the accumulated heat of the earth, bring on the burning months

of July, August, and September, which are the most oppressive and exhausting of the whole year. The extreme rarefaction of the atmosphere now begins to operate as one of the causes tending to the production of those terrible hurricanes, or rushes of wind, called typhoons (*Tae-foong*—"great wind"), which are justly dreaded by the inhabitants of southern China; but which chiefly devastate the coasts of Haenân, and do not extend very much to the north of Canton.

The name typhoon, in itself a corruption of the Chinese term, bears a singular (though we must suppose an accidental) resemblance to the Greek τυφων. The Chinese sailors and boatmen have from habit become very clever prognosticators of these hurricanes, and indeed of all kinds of weather, without the aid of the barometer. They have a common saying, that "lightning in the *east* denotes fine weather—in the *west*, successive showers—in the *south*, continuous rain—in the *north*, violent wind." It is quite certain that typhoons always commence in the north quarter. The principal circumstances to be observed concerning these hurricanes are, the state of the barometer previous to and during the storm, the influence of the moon, and the localities in which they prevail. The barometer falls slowly for many hours, often a whole day before the commencement, the mercury sometimes descending nearly to twenty-seven inches during the progress of the gale; and its rising is a sure sign of subsidence. Another sign of the approaching storm is the long and heavy swell which rolls in upon the sea-beach, without any apparent cause, for some time before the hurricane begins; but which may perhaps be explained by so much of the usual pressure of the atmosphere (equal to two inches, or a fifteenth part of the mercurial column) being removed from the surface of the water; and this

circumstance may likewise partly account for the overwhelming seas that are so much dreaded by ships encountering the typhoons. The most likely periods for their occurrence are August and September, just at the change of the moon. The gale commences at north, goes about to east and south, and finishes at west. Typhoons seldom prevail below 10° north latitude, or much above the parallel in which Canton lies; and their range west and east is from the shores of Cochin-China to 130° longitude.

About Haenân and the strait which divides that large island from the main land, the typhoons are so dreadful that temples are built expressly to deprecate them, and on the fifth day of the fifth moon the magistrates offer sacrifices. In addition to the prognostics already noticed, they are preceded by a thick muddy appearance of the atmosphere, and a show of unusual disquiet among the sea-fowl. Thunder is considered as a symptom of mitigation. They seldom reach forty-eight hours, and their duration is commonly confined to twenty-four. In the year 1831, on or about the 21st September, a typhoon blew with unusual fury at Macao. It commenced at night: and by three or four o'clock in the afternoon of the following day, the whole place was one scene of devastation, probably not unlike the ruin occasioned by the tornadoes in the West Indies. Houses were unroofed, ships stranded, and the solid granite quay in front of the town completely levelled. Great blocks of stone, some tons in weight, were carried a considerable way up acclivities, which might appear impossible, but for the fact that the heaviest bodies are less ponderous in water than out of it, by the weight of the fluid they displace.

No small portion of the destruction occasioned by typhoons extends to the productions of agriculture and

husbandry. The wind which blows from the south and east, being charged with salt water, has a withering effect on all the vegetation near the coast; trees are broken or rooted up; and rivers, already swelled by the summer rains, are driven in floods over the low lands which rice-cultivation chiefly occupies. But besides hurricanes and floods, other disasters attend on Chinese husbandry. Long-continued droughts are not unfrequent, assailing various portions of the empire by turns. The ravages of locusts are particularly dreaded in the north. Père Bouvet, in a journey from Peking to Canton during the year 1693, observed that "in Shântung the country was laid waste by a frightful multitude of grasshoppers, called from their colour *Hoâng-choong*, 'the yellow insect or locust.' The air was full of them, and the earth covered in such a manner, even in the great roads, that our horses could not move without raising clouds of them at every step. The insects had entirely destroyed the hopes of the harvest in this country: the mischief, however, did not extend far, for, within a league of the place where this havoc was made, all was perfectly free." The plague of locusts is said to occur when great floods have been followed by a long drought.

These are some of the chief natural discouragements to agriculture in a country which possesses a large proportion of fertile lands, watered by the innumerable branches of those two great trunks, the Yellow River and the Keâng. There is perhaps no point relating to China that has been more overstated than the condition of its agriculture was by the early missionaries; probably in consequence of the contrast which it presented to the existing state of husbandry in Europe at the time when they wrote. The opinion formed by Dr. Abel was, "that, much as the Chinese may excel in obtaining abun-

dant products from land naturally fertile, they are much behind some other nations in the art of improving that which is naturally barren." They exhibit, however, great perseverance and skill, about the neighbourhood of Canton, in gaining muddy flats from the water by extensive and well-constructed embankments. The subject on which most exaggeration has prevailed is the system of terrace-cultivation, which certainly exists in hilly districts, and may even be seen from the vessels at Whampoa, but is by no means carried to the marvellous extent that has been supposed. "While passing through the mountainous provinces of the empire, we naturally looked for that far-famed terrace-cultivation which had led to the notion of China being one vast garden, with hills terraced from the base to the summit. The wild and wooded tracts which were occasionally passed at length convinced us that they do not often attempt to cultivate a surface naturally sterile or difficult, except in the immediate vicinity of towns; and that the terracing of hills is generally confined to those lower situations where an accumulation of their degraded surface affords a soil naturally productive."

The following is a summary view of the different sorts of cultivation observed by our embassies from Peking to Canton. Upon first landing on the shores of the Gulf of Pechely, the extensive alluvial flats along the river leading to the capital exhibited a dreary waste, with only occasional patches of cultivation, confined chiefly to the *Holcus*, or tall millet, and small clumps of trees surrounding houses or temples. The banks of the river sometimes alone showed traces of tillage, and even these, where of a sandy nature, remained barren. This continued until we approached the immediate neighbourhood of Tien-tsin, which terminates the Grand Canal to the north, and

between which city and the sea the whole country is nearly an unreclaimed marsh, the inhabitants bearing in their general appearance the proofs of its unhealthiness. This is perhaps the best safeguard from an invading force on the side of the coast. After passing Tien-tsin considerable improvement was observed towards Peking, and various additions to the number of cultivated plants. Besides the holcus, beans were grown, with the *Sesamum orientale*, from which they extract an esculent oil, and the *Ricinus communis*, or castor-oil plant; but, above all, the *pĕ-tsae*, or white lettuce, which is salted, and conveyed even to Canton. The trees comprised elms, willows, and a species of ash. The fields were not divided by any sort of hedge, but, as in every other part of the empire, by narrow ditches or drains, or by a ridge serving for a pathway.

When the travellers turned down the canal, on their way towards Canton, a great part of the land on both sides in Shantung had, as Mr. Ellis observed, "suffered so severely from inundation that it was impossible to form a correct opinion of its usual appearance." But the presence of the *Nelumbium* argued its being generally swampy. On entering Keâng-nân the country began to improve, and the northern parts of that province were highly fertile, being cultivated chiefly with rice and millet. In the neighbourhood of Nanking the banks of the great river Keâng were planted with groves of *Thuya orientalis*, and with rice in flat alluvial patches. It was in this part of the country that the cotton-shrub was first observed. In proceeding along the river towards Keâng-sy and the lake, the cultivation of rice prevailed; but on approaching the side of the lake, the country became hilly and wooded. It was here that the finest scenery commenced; for the whole of Keâng-sy, from the Poyang

lake to the Mei-ling pass, was more or less mountainous. The cultivation of this province in grain, vegetables, and sugar-canes bore no proportion to the hills, which were either entirely barren or covered with plantations of the single white camellia, whose seeds afford the favourite vegetable oil of the Chinese. The shrub is generally from six to eight feet in height, bearing a profusion of large white single blossoms. "The hills over which it spread," observes Dr. Abel, "looked in the distance as if lightly covered with snow, but on a nearer view exhibited an immense garden. Their general bleakness and declivity unsuited them to ordinary modes of culture, and the soil was of a red sandy nature."

But, besides the camellia, other plants or trees of great utility and beauty were observed in Keâng-sy, as the *Croton*, whose berry supplies a vegetable tallow, fir and camphor trees, and the varnish-shrub. As the stream of the river became most rapid towards its source, and the neighbourhood of the Mei-ling pass, those water-wheels, already described in Chap. XX., became numerous, for irrigating the sugar-cane plantations. On arriving at the ridge which divides off the Canton province to the south, extensive woods appeared to cover both sides; and, from the pass itself to within two days' journey of Canton, we saw little else than a succession of sterile, but highly picturesque mountains. Down as far as Chaou-chow-foo the river was lined with barren limestone cliffs, their intervals thickly wooded, but with little appearance of agriculture. From the latter place southwards were red sandstone rocks, gradually flattening into an alluvial country, which, as it approached Canton, was cultivated richly with rice and fruit-trees. *Below* the last city the river forms a great delta, the whole of which has been converted, by means of embankments, into an extensive level for the

cultivation of rice..* Out of this level are seen frequently to rise clusters of granite hills, like islands in a sea.

The foregoing describes the whole track of the embassy in 1816; but Lord Macartney's mission deviated at the point where the Keâng is crossed by the canal, near Chinkeang-foo; and, instead of proceeding up that great river to the northern extremity of the Poyang lake, they continued their course on the canal to Hâng-chow-foo. Then, crossing the province of Chĕ-keang, they entered Keâng-sy to the east, and reached the lake at its southern end. In the course of this route they observed the cultivation of the Nanking cotton-shrub, and the plantations of young mulberry-trees for the nourishment of silkworms. Here also rice formed a principal item in farming; and the hills were planted with the useful trees and shrubs observed elsewhere. On approaching the neighbourhood of the Poyang lake from the east, the country consisted of swamps, the drainings from the hills, intersected by numerous branches of rivers; and the industry of the inhabitants was turned from agriculture to the business of fishing, as well as of entrapping the numerous varieties of wild-fowl which there abound.

No good land is ever reserved in China for *pasture*, which in fact can scarcely be considered as forming a department of their husbandry. The few cattle that they have are turned out only upon waste lands, which are never improved by any sort of artificial manuring or dressing. To this must partly be ascribed the poor and stunted appearance of their cows and horses. The flesh of flocks

* The member of the emperor's council, who contended against legalizing the growth of the poppy, observed—"Shall the fine fields of Canton province, which produce their three crops a year, be given up to the cultivation of this noxious weed? - those fields, in comparison with which the unequal soil of all other parts of the empire is not even to be mentioned."

and herds is scarcely tasted except by the rich, and no Chinese ever uses either milk, butter, or cheese. "Not only has it been the care of the government, from the earliest ages, to give every direct encouragement to tillage, and to the production of food for man alone, but there have always existed some absurd prejudices and maxims against an extended consumption of flesh-food. The Penal Code denounces severe punishment against those who kill their own cattle without an express licence.* It is a well-known principle that, where tillage exists to a considerable extent, the rent of land reserved for pasture must, in proportion to its goodness, be equal to that of land employed in producing grain;† and this, under a rice-cultivation, where three crops per annum, or two of rice and one of vegetables, are said sometimes to be obtained, must have such an obvious effect in raising the comparative price of meat as must discourage its consumption among a frugal people like the Chinese, even without the intervention of any positive law.

There is accordingly no people in the world (the Hindoos excepted—and they use milk) that consumes so little meat, or so much fish and vegetable food; nor, again, is there any country in which fewer cattle are employed for the purposes of draft and burthen. Where every institution tends to keep a population up to the very utmost limits of a bare subsistence, and where neither pride nor prejudice steps in between the labourer and his work, human exertion naturally supplants every other. In the southern parts of the empire, therefore, beasts of carriage and draft, with the exception of a few miserable riding-horses and a few buffaloes for ploughing, are nearly unknown. Towards Peking and the borders of Tartary, the case

* Book iv. sect. 223.

† Wealth of Nations, book i. chap. 11.

becomes altered; but the Great Wall may still be considered, generally, as the boundary that separates two peoples, one of them exclusively pastoral, and the other as exclusively tillers of the earth.*

The provincial government of Canton, in 1833, obtained the sanction of the emperor to a very sensible plan for inviting the poorest people to settle down on waste spots of land wherever they might find them, cultivating these in the best way they could for their own sole benefit, without any tax or other charge whatever. The land, thus entered on might hereafter become liable to the land-tax; but it was made the freehold property of the first cultivators, with a deed of grant from the government; and, as the object was the relief of the poor, no rich person was allowed to apply. The edict by which the foregoing regulation was promulged, observed, that "in government there is nothing so important as a sufficient supply of food for the people. . . . If the poor people will but spend their strength on the southern lands, food and raiment will be supplied, and they will never be brought to abandonment and disgrace, nor become the associates of vagabond banditti. All those who sink down to depraved courses have been impelled to them either by hunger and cold, or by voluntary laziness. In Canton province thieves and robbers are exceedingly numerous, and they have no doubt originated in these causes. In attempting to eradicate their evil practices, the first thing is to provide them with the means of subsistence." †

Under all the circumstances, it is very surprising that the potato should have made so little progress as an article of cultivation and food since its first introduction

* Royal Asiatic Transactions, vol. ii. 4to.
† Chinese Repository, vol. i. p. 503.

at Canton. Nothing indeed could more convincingly demonstrate the strength of Chinese prejudices than their indifference to that, as well as to other European vegetables, as cabbages, peas, &c., which, with the potato, have been cultivated at Macao for half a century. The rice-fields near that place are, during winter, converted to the growth of kitchen vegetables, including potatoes; but these are mainly for the supply of the European and native Portuguese population. Even the shipping near Canton is supplied with potatoes from Macao, where they are sufficiently abundant and cheap; but at the former place their use is not enough extended to have reduced their price. It is probable that from climate, soil, or other causes, joined to the ancient prejudice in its favour, rice will long continue to be preferred as an object of cultivation. The labour bestowed upon it is of a more compendious nature than that devoted to the growth of kitchen vegetables, and, in the southern parts of the empire, perhaps better repaid by the produce. In the case of everything except rice, the Chinese seem to manure rather the plant itself than the soil, supplying it copiously with their liquid preparation; and the motive to this is economy, for the heavy rains wash away all the soluble parts of the earth, leaving a sterile mass of sand and stones.

Every substance convertible to manure is diligently husbanded. The cakes that remain after the expression of their vegetable oils, horns and bones reduced to powder, together with soot and ashes, and the contents of common sewers, are much used. The plaster of old kitchens, which in China have no chimneys but an opening at the top, is much valued; so that they will sometimes put new plaster on a kitchen for the sake of the old. All sorts of hair are used as manure, and barbers'

shavings are carefully appropriated to that purpose. The annual produce must be considerable, in a country where some hundred millions of heads are kept constantly shaved. Dung of all animals, but especially nightsoil, is esteemed above all others; which appears from Columella to have been the case among the Romans. Being sometimes formed into cakes, it is dried in the sun, and in this state becomes an object of sale to farmers, who dilute it previous to use. They construct large cisterns or pits lined with lime-plaster, as well as earthen tubs sunk in the ground, with straw over them to prevent evaporation, in which all kinds of vegetable and animal refuse are collected. These, being diluted with a sufficient quantity of liquid, are left to undergo the putrefactive fermentation, and then applied to the land. They correct hard water by the addition of quicklime, and are not ignorant of the uses of lime as a manure. "The Chinese husbandman," Sir George Staunton correctly observes,* "always steeps the seeds he intends to sow in liquid manure, until they swell and germination begins to appear, which experience (he says) has taught him will have the effect of hastening the growth of plants, as well as of defending them against the insects hidden in the ground in which the seeds were sown. Perhaps this method has preserved the Chinese turnips from the fly that is often fatal to their growth elsewhere. To the roots of plants and fruit-trees the Chinese farmer applies liquid manure likewise, as contributing much towards forwarding their growth and vigour." With regard to fruit-trees, they have found that the best situations for planting them are by the sides of rivers. "Few situations," observes a paper in the Horticultural Transactions, "combine so many advantages for the plantation of

* Embassy, vol. ii. p. 476.

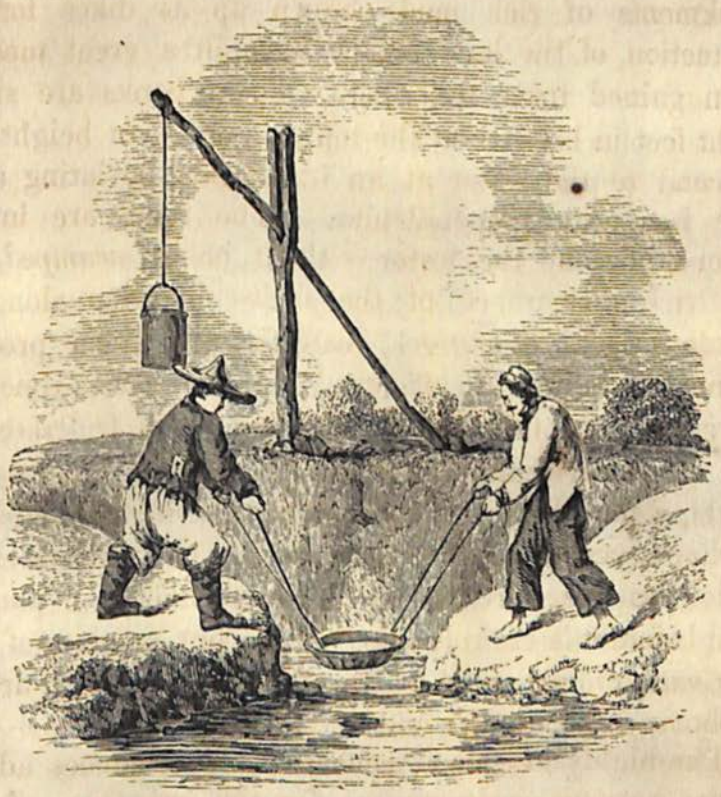
orchards or fruit-trees as low grounds that form banks of rivers. The alluvial soil, of which they are generally composed, being an intermixture of the richest and most soluble parts of the neighbouring lands, with a portion of animal and vegetable matter, affords an inexhaustible fund of nourishment for the growth of fruit-trees." *

The sides of Chinese rivers are commonly high embankments of rich mud, thrown up as dikes for the protection of the lands which have in a great measure been gained from the river. These banks are six or eight feet in breadth at the top, five or six in height, and descend to the water at an inclination deviating about 30° from the perpendicular. The roots are in this manner *fed* by the water without being *swamped*, and the rich appearance of the fruit-cultivation along the Canton river, in oranges, plantains, and other produce, seems to attest its efficiency: at the same time, the advantages of the system may be partly frustrated by the exposure of such situations to plunder from passing boats, where there is a crowded population; and this may perhaps account in some measure for the perverse habit, which has been remarked in the Chinese, of plucking fruit before it is entirely ripe. The worst enemies of fruit-cultivation near some parts of the south coast are the typhoons, which break and destroy the trees.

The highly ingenious mechanical contrivances adopted under various circumstances for the irrigation of lands have been already described in the nineteenth chapter. Occasionally a single bucket is used, attached to the extremity of a long lever, which is nearly balanced and turns upon an upright, as may be observed in some parts of our own and various other countries. Where the elevation of the bank over which water is to be lifted is

* Vol. vii. p. 135.

trifling, they sometimes adopt merely the following simple method:—A light water-tight basket or bucket is held suspended on ropes between two men, who, by alternately tightening and relaxing the ropes by which they hold it between them, give a certain swinging motion to the bucket, which first fills it with water, and then empties it



Mode of Irrigation.

by a jerk on the higher level; the elastic spring which is in the bend of the ropes serving to diminish the labour. This mode of irrigation is represented in the preceding cut from Staunton.

The rice grown by the Chinese is of a much larger grain than that which is common in India, and consists

principally of two sorts, the white, or finer, and the red, or coarser kinds. They have a great prejudice in favour of their own native produce; but, when this is scarce, are ready enough to purchase what comes from abroad. The Canton government encourages the importation of foreign rice by exempting the ships which bring it from port-charges; but this advantage is in great measure rendered nugatory by the dishonesty and exactions of the lower mandarins, which have sometimes caused ships to proceed no farther than Lintin, where the rice has been sold to coasting-junks. At other times, however, this mode of avoiding a portion of the heavy expenses of the Canton river has occasioned an importation of from fifteen to twenty thousand tons in the ships of various nations—a small quantity, after all, for the demands of an enormous population. A considerable quantity of grain is used for fermented liquors and for distillation. The mandarins are such bad political economists as frequently to prohibit, when there are fears of scarcity, the appropriation of grain to these purposes; being ignorant that, if really required for food, the price would prevent its conversion to the other purpose; and, above all, that such a use of it always maintains a surplus supply, which may be resorted to in case of extremity.

The plough used in rice-cultivation is of the simplest construction. A sharp coulter, or blade, in front of the share, is found needless, as the ground is of a light loamy description, and they never have to cut through turf. The plough is in some parts of the country drawn through the soil by human strength; in others by oxen, asses, and mules, yoked together indiscriminately. The ploughshare terminates at the back in a curve, which serves as a mould-board to turn aside the earth. In the Canton province the soil of the rice-fields is ploughed by means of a

small buffalo, of a dark grey or slate colour, called by the Chinese *Shuey-new*, "water-ox," from its propensity for muddy shallows, where it wallows in the mire, with habits more allied to some of the pachydermatous than the ruminating tribes. When sufficient rain has fallen in spring to allow the rice-fields to be laid under water, they are subjected to the plough in that condition, the buffalo and his driver wading through the wet and slime up to their knees —an operation to which the "water-ox" is admirably fitted by nature. After this a rake or harrow with a single row of teeth, and frequently a man standing on it, is dragged through the soil in order to break the lumps and clean the ground.

The rice is first of all sown in a small patch duly prepared and flooded with water, and subsequently transplanted to the fields where it is to grow. A short time previous to being sown the seed is immersed in liquid manure, which promotes its future growth, and renders it less obnoxious to worms or insects. In two or three days after being committed to the ground the young shoots appear, of a beautiful light-green colour, and when they have reached a proper height they are removed to the fields which had been prepared for their reception. The process of transplanting, as observed in the Chinese Repository,* exhibits a division of labour that is perfect. One person takes up the shoots, about six inches in length, and hands them to another, who conveys them to their destination. They are received by another party of labourers, standing ankle-deep in mud and water; some of whom dibble holes into which they drop the plants by sixes, while others follow to settle the earth about the roots; the distances between these tufts being six or eight inches every way. The field is then kept flooded accord-

* Vol. iii. p. 231.

ing to its wants, or to the circumstances of the season; and any unusual deficiency of water is of course fatal to a grain which, from its nature, the Americans of Carolina call "swamp-seed."

The fields are weeded and otherwise attended to between seed-time and harvest; and when the rice, by turning yellow, is known to be nearly ripe, the water is gradually drawn off; so that, by the end of June or beginning of July, when it is time to reap, the fields are nearly dry. The tufts of grain are cut singly near the ground, by means of a species of sickle or crooked knife, and then carried off in bundles or sheaves to be threshed. The floor employed for this purpose is of hardened earth, either with or without an admixture of lime. The grain has been said to be trodden out sometimes by cattle, but the most usual implement for threshing is the common European flail. They have a winnowing machine precisely like ours, and there seems to be the best evidence for the fact that we borrowed this useful invention from them.* To get rid of the tenacious husk of the rice, it is pounded in stone mortars, of which the cone-shaped pestles are worked by horizontal levers attached to them. A wheel moved by water turns a cylinder, to whose circumference are attached cogs, which, meeting the extremities of the levers, strike them down alternately, and thus raise the pestles at the other end.

For the second crop of rice the ground is immediately cleaned of the old stubble and roots and laid again under water. Fresh plants are inserted as before, and the harvest is gathered in November. When other grains are sown, it is not by broadcast, but by the drill method, with a view to economizing the seed. One drill-plough

* A model was carried from China to Holland; and from Holland the first specimen reached Leith.

was observed by Mr. Barrow different from the rest. "It consisted of two parallel poles of wood, shod at the lower extremities with iron to open the furrows; these poles were placed on wheels; a small hopper was attached to each pole to drop the seed into the furrows, which were covered with earth by a transverse piece of wood fixed behind, that just swept the surface of the ground." The third annual crop obtained from the land consists of pulse, greens, and other vegetables, obtained during the dry and cold winter months. At this period the rice-fields near Macao produce an abundance of potatoes, peas, and cabbages, for which the Chinese summer in that latitude would be too hot and rainy. In lieu of a spade, they use a large heavy iron hoe, which is a more expeditious but far less efficient instrument, as it barely turns the earth to half the depth of the other. This hoe serves them instead of every variety of tool, for weeding, trenching, digging, or whatever may be the operation required in the field or garden.

The tendency, which has already been noticed in the Chinese institutions, to reduce tenements in general to a very small size, is probably one of the causes of the simple and economic processes that prevail in their husbandry. The cultivator, being possessed of no superfluous capital, derives the most that he can from the soil by the cheapest method, and is lavish of nothing, except it be his labour. The land is never allowed to lie fallow, but its fertility is restored and maintained by an indefatigable system of tilth and manuring. This may serve partly to explain the diligence with which all putrescent substances are converted to this purpose, and especially the most disagreeable one for which the Chinese are so noted. The extreme paucity of every species of cattle for purposes of either food or cultivation deprives them of the principal

source of European fertilization, and at the same time suggests the substitute; to which may be added the circumstance of each tenement being in general a small patch of land immediately contiguous to the dwelling of the cultivator. But independently of both manuring and fallowing, there appears to exist some ground for the opinion that the absence of *both* expedients may be supplied to a considerable extent by repeated ploughings or exposures of the soil. The author has still in his possession a letter from the late Sir Joseph Banks, in which that distinguished person observed, with reference to a work on the agriculture of the Hindoos, as follows: "What astonishes me is, that no mention is made in any part of it of manures or of any fertilizing process, except repeated ploughings, of which, in the case of sugar, a great many are said to be necessary. We find in Europe that repeated ploughings increase the fertility of the soil; but can it be that we, who seldom exceed four, are so ignorant as not to know that by a much greater quantity of labour the fertility may be proportionably increased?"

In what has already been said of the social and agricultural state of China, enough may perhaps have appeared to account, in some measure, for the very numerous population which that country unquestionably possesses, though the actual amount is a point not so easily to be ascertained. There certainly never has been known a people that held out so many direct encouragements to the growth of population, or so completely set at nought all those prudential restraints which have been proposed to us by Mr. Malthus. But it must be admitted that they pay the penalty in the shape of a great deal of consequent poverty and misery, clearly resulting from those parts of their system which tend constantly to increase their numbers beyond the existing capability of the country to maintain

them; and prevailing in spite of circumstances favourable to a general distribution of the means of subsistence. It may be as well to review, in the first place, the principal causes which conduce to the unexampled population of China, and then to exhibit the different statements as to the actual amount.

We have already seen that the advantages with which the country has been gifted by nature have been improved to the utmost by its industrious inhabitants, in the actual state of their knowledge and social condition; that agriculture, the source of food, has been honoured and encouraged beyond every other pursuit; and that the culture of the land (even when divested of the exaggerations of early writers) and the nature of its produce are such as to afford the largest return, under the circumstances, to the labour employed. It has been remarked, too, that the prevalence of agricultural over manufacturing occupations must tend to prolong life, as well as to increase food. Excepting those of the emperor in the vicinity of the capital, there are no extensive parks or pleasure-grounds reserved from the operations of productive industry. In the prevailing absence of wheel-carriages and horses, the least possible ground is occupied by roads; and the only tracts devoted to sepulchral purposes are the sides of barren hills and mountains. There is no meadow-cultivation whatever; nothing is raised for the food of cattle, but all for man; and this is a more important circumstance than it may at first sight appear.

In China there exists, as we have observed, the smallest possible number of horses and of any animals for the purposes of labour, carriage, or draft; and these maintain themselves as they can on pastures unsusceptible of cultivation. Scarcely any domestic animals are kept unless for food. There is a very limited con-

sumption of any kind of meat among even the higher orders; and the lower subsist almost exclusively on the productions of tillage.* Now it has been calculated that, in Great Britain, above a million horses are engaged in transporting passengers and goods, and that the support of each horse requires as much land as would feed eight men. Here then are eight millions supplanted; and it is when this point has been reached that the maintenance and use of horses become so comparatively costly as to give rise to inventions for superseding them, like steam-carriages. In China, whatever cannot be transported by water is borne on men's shoulders, and the very boats on their canals are tracked by men.

In no other country, besides, is so much food derived from the waters. The missionaries employed in constructing the map of the empire observed that a large number of boats were collected from various parts on the great Keâng, at a particular period of the year, to procure the spawn of fish. A portion of the river being dammed up with mats and hurdles, the water becomes charged with the spawn, which is carried in vessels to distant places, and distributed wherever fish can subsist. Besides the ordinary contrivances of nets and wicker-traps of all kinds, the Chinese have several modes of taking fish peculiarly their own. During moonlight nights they use long narrow boats, having wooden flaps at their sides, descending to the surface of the water at a particular inclination, and painted white. The fish, being deceived by the light reflected from these boards, leap upon them, and are turned over into the boat with a jerk. We have already had occasion to observe that the innumerable

* The present price of meat in England is about four times that of bread; or, where an acre of ploughed land will feed a given number of persons, it would require nearly four of pasture.

fishing-boats on the southern coasts maintain a race of hardy sailors, who have more than once, by their piratical combinations, given great trouble to the government, and were gained over at last only by concession.* The vast quantities of fish which are caught are mostly salted, and thus consumed with rice. It is on the lakes and swamps of Shantung and Keang-nân that the fishing-bird is trained to exercise his piscatorial habits in the service of man, and they may now be seen on the pieces of water within the town of Ning-po. Numbers of them were observed by our embassies perched in every boat, from which, at a given signal, they disperse themselves over the water and return regularly with their prey.

Fishing with Birds.

The political causes which tend to swell the population of China are numerous and powerful. Among these are the paternal rights which continue during life, and render a son, even in that over-peopled country, an important acquisition. How effectual and necessary male children

* Since our war they have again become as numerous as ever.

are considered to the support of aged parents, is proved by the laws of the country, which grant life sometimes even to a condemned homicide, if the want of another son or grandson, above the age of sixteen, renders his existence necessary to the support of a parent. In some cases the next nearest relative, as a nephew, may be reprieved from death under the same plea.* We have seen before that the power over children is in reality absolute, and it appears that the original relation of the offspring to both their parents remains in full force, notwithstanding the divorce of the latter. The other cause which renders male children so desirable is the sentiment regarding sacrifices at the tombs, and in the temple of ancestors, on which the whole plot of one of their plays has been mentioned as turning. In default of male children, there is a legalized mode of adoption, by which the line is perpetuated, and the family prevented from becoming extinct. Even the tendency of slavery to check population is counteracted, by a law which makes the owners of domestic slaves, who do not procure husbands for their females, liable to prosecution.

But the perpetuation of families does not tend more to the density of the population than the manner in which those families live and are maintained. It is a universal system of *clubbing* on the most economical plan. The emperor observes, in the Sacred Instructions, that nine generations once lived under the same roof, and that "in the family of Chang-she, of Keang-chow, *seven hundred* partook of the same daily repast. Thus ought all those who are of the same name to bear in remembrance their common ancestry and parentage. . . . May your regard for your ancestors be manifested in your mutual love and affection; may you be like streams diverging

* Peking Gazettes. Royal Asiatic Transactions, vol. i. p. 395.

from their sources,* or trees branching from their stems." The claims of kindred being thus strengthened and enforced, and supported besides by common opinion, the property of families is made to maintain the greatest number possible; and even if any prudential scruples respecting marriage were supposed to exist in the mind of a Chinese, this would tend effectually to remove them.

Another political cause that aggravates the over-population of the country is the obstacle that exists, both in law and prejudice, to emigration. "All officers of government, soldiers, and private citizens, who clandestinely proceed to sea to trade, or remove to foreign islands for the purpose of inhabiting and cultivating the same, shall be punished according to the law against communicating with rebels and enemies."† Necessity of course renders this in a great measure nugatory; but it must discourage emigration; because, even supposing a subject to have amassed a fortune in foreign countries, there is the clear letter of the law to hang perpetually over him on his return; and it is precisely in this way that all persecution and extortion in China is exercised—by quoting the law against a man. But, independently of this, the abandonment of his native place, and of the tombs of his ancestors, is always abhorrent to the mind of a Chinese; and the consequence is, that no persons but the most indigent or desperate ever quit their country.

In the general list of causes must not be omitted a very important one—the uninterrupted peace which, up to our own war, has been enjoyed by this country since the complete establishment of the Manchow dynasty, a period now considerably exceeding a century and a half. The

* This comparison is evidently false. Streams *converge* from their sources; and a genealogical river would be as absurd as a genealogical tree is correct.

† Penal Code, sect. ccxxv.

depopulating effects of war are by no means to be measured or estimated alone by the numbers that actually die, for that loss would soon be repaired; but by the ruin and destruction of the funds for the support of existence, and the cessation of the occupations which produce those funds. At the Tartar conquest the waste of human life appears to have been almost beyond belief; but since that time the country enjoyed a period of general tranquillity scarcely to be equalled even in Chinese annals. Two of the Manchow sovereigns were very extraordinary persons: their administration conferred a degree of prosperity on the empire which raised or restored it to its present condition, and increased its population, according to native accounts, at a rate which seems absolutely incredible, if measured by European calculations or experience. It is now time to exhibit the different statements on this subject—statements so vague and contradictory that it does not appear easy to come to a very satisfactory result.

It seems clear that the native statistical accounts are, under any circumstances, and with all their defects, the only sources of information on which much dependence can be placed. Our two embassies bore witness to the countless numbers that came under their observation on the route between Peking and Canton; but the provinces and districts through which both missions passed are confessedly the richest of the whole empire, and well known to excel, both in fertility and population, those to the westward. The Grand Canal and the Keâng render them the great commercial route between the northern and southern provinces; and the British embassies drew together the whole population of the cities and neighbourhoods through which they travelled, the mandarins who attended them declaring that the crowd and bustle (*chaou naou*) exceeded anything they themselves had before

witnessed. The estimate of three hundred and thirty-three millions, obtained from one of the conductors of Lord Macartney, is confessedly a document in *round numbers;* but, being declared to be founded on official returns, might at least be considered as an approximation to the truth, if the accounts derived by us, directly from their own statistical works, did not unfortunately discredit themselves by the contradictions and inconsistencies that pervade them.

Grosier, on the authority of Amiot, who quoted the *Ye-tung-chy*, or statistical account of the whole empire, made the population in 1743 amount to one hundred and ninety-eight, or two hundred millions. There is nothing incredible in this, considering that the area included within the limits of China proper is above eight times that of France. But on comparing it with the three hundred and thirty-three millions of Lord Macartney's authority, just fifty years afterwards, an increase of considerably more than half within that period seems very large. The true point of difficulty is the degree of credit that is to be attached to the Chinese census. The division of the whole population into hundreds and tithings seems calculated to secure some degree of correctness in the returns; yet it has been stated, on native authority, that "the ordinary report of the population is a mere matter of form, to which no particular attention is paid. When a census is especially called for by the emperor, the local officers just take the last one, and make a lumping addition to it, in order to please his majesty with the flattering idea of increase and prosperity. Now, although it is true that the enormous census of three hundred and thirty-three millions was not made to impose on foreigners, yet it might have been made by this proud nation to impose on themselves."*

* Letter in Chinese Repository, vol. i. p. 385.

In a paper by Dr. Morrison (appended to a report of the Anglo-Chinese College in 1829) there is an account, obtained from a native work, of the functions of the Board of Revenue at Peking, which among other matters takes cognizance of the population. It appears that at the commencement of the present dynasty of Manchow emperors, and soon after their occupation of the country, a census was taken, with reference to a poll-tax and a liability to military service, of all males above sixteen and under sixty years of age. The poll-tax was afterwards merged in the land-tax, the census disregarded, and the poll-tax for ever interdicted. The census was, however, afterwards restored by the Emperor Kien-loong, not with any view to taxation, but simply to ascertain the amount of numbers in each province and district, and this was to be taken by the heads of tens and of hundreds every three or five years. The first report was to the local magistrate, the next from him to the heads of the province, while these last transmitted the accounts to the supreme government. The avowed object of this census was to have some guide in apportioning government relief during periods of drought, inundation, and famine, to particular districts; as well as to aid the police in the execution of their duties.

When the census was taken by Kien-loong shortly previous to the embassy of Lord Macartney, that emperor, in the fifty-eighth year of his reign, corresponding to 1793, issued a proclamation addressed to the whole empire, calling upon all ranks and conditions of men to economise the gifts of heaven, and by industry to increase the quantity; for, observing the increase of population since the period of the conquest, he looks forward with deep concern to the future, when the numbers of the people shall have exceeded the means of subsistence. "The

land (he says) does not increase in quantity, although the people to be fed increase so rapidly." Here is the highest authority to prove that a very great increase had really taken place; but when we come to the particulars, they are such as to stagger all belief. The emperor goes on to say that in the forty-ninth year of Kâng-hy (A.D. 1710), or under the old system of the poll-tax, the population of the empire was rated at 23,312,200 and odd; and that by the late census, according to returns sent from all the provinces, it amounted to 307,467,200!

"The increase," observes Dr. Morrison, "seems so enormous in a period of about eighty-two years, that some error in the figures might be supposed. However, the emperor remarks that the increase had been about fifteen-fold, which shows there was no mistake; since fifteen-fold would make the amount three hundred and forty-five millions."* Dr. Morrison proceeds to say that "the statement proves Mr. Malthus's position, that population may double itself every twenty-five years, for this is nearly doubling it every twenty years." Indeed it proves a great deal too much, unless some way can be discovered of reconciling the account with bare possibility. But we must remember that a great portion of the country was *unsubdued* in the reign of Kâng-hy. The southern parts of the empire held out obstinately against the Tartars, and some of them were long governed by independent Chinese rulers. These, then, must of necessity have been, for the time, excluded from a census of the subjects of the Manchow dynasty. At the time when the numbering took place by order of Kien-loong, every portion of the present empire was united in peaceful subjection to his sway, and had, besides, enjoyed unusual

* The increase, according to the numbers given, is something more than thirteen-fold.

peace and prosperity during his reign of extraordinary duration.

Again, we must call to mind that the census, so remarkable for its small amount under Kâng-hy, was with reference to a *poll-tax* and to *military service*, two objects which were of all others the least calculated, during an unsettled and half-subdued state of the country, to ensure a correct or full return. It was long before the Chinese could get over their natural aversion to the Tartar dominion; and, for the first generation or two, it is likely that great numbers would seek refuge, either in some part of China still independent, or in some neighbouring countries or islands, as we have seen that they did in Formosa. The Manchow conquest is said, by the combined effects of war and emigration, to have reduced the population of China to less than half its amount under the *Ming* race; but the conquest has been followed by almost unexampled peace and prosperity during a period considerably exceeding a century and a half; and this circumstance, in connexion with those several parts of the Chinese system which we have already noticed as eminently favourable to increase, must have had its effect in peopling the country. The unrestrained march of population in its "geometric progression" is easily comprehended in a new country, like America, with plenty of fertile land: but, in China, it is necessary to explain an apparently sudden and extraordinary increase on particular and specific grounds.

A census said, on the authority of a Chinese statistical work of some note, to have been taken in the seventeenth year of Keaking (1812) goes beyond the amount stated to Lord Macartney, and makes the population reach the number of 360,279,897. If the other is to be received, there is less difficulty in believing the increase that this

last exhibits in nineteen years. It must be left to the reader's own judgment to determine how far the accuracy of a Chinese census is to be trusted, after he has been informed that the account is made up from the returns received in detail from every village in the empire, in which the houses are provided with what is called a *Mun-pae*, or "door-tablet," on which are inscribed all the individuals of the family. The lists are transmitted through several channels before they reach Peking, and may occasionally, if not always, be liable to falsification by those who wish to flatter or gratify the court by the idea of increase. Taking the area of China at 1,200,000 square miles, we should, on the latest estimate, have three hundred inhabitants on a square mile, which is more than has been attributed to England or Holland.

Mr. Malthus, without seeming to have been aware of the disproportion between the census of Kâng-hy and that of Kien-loong, appears disposed to credit the 333,000,000 stated to Lord Macartney as the actual population of China at the end of the last century, on the ground of the extraordinary encouragements which are there given to the continual multiplication of the species. "The natural tendency," he observes, "to increase is everywhere so great, that it will generally be easy to account for the height at which the population is found in any country. The more difficult, as well as the more interesting part of the inquiry, is to trace the immediate causes which stop its farther progress. The procreative power would, with as much facility, double in twenty-five years the population of China, as that of any of the states of America: but we know that it cannot do this, from the palpable inability of the soil to support such an additional number." The great increase that has certainly taken place since the depopulating effect of the Tartar conquest (though

likely in reality to be considerably less than the Chinese census) has been in some measure a mere restoration to the land of the population which it *before* maintained; in which respect the situation of the country has, to a certain degree, and for the time, been as favourable to increase as that of new colonies.

It is pretty generally admitted that, as the preventive checks in any country operate feebly in restraining the overflow of population, the positive checks will be called into more powerful action; and in this respect China affords a signal corroboration of the Malthusian doctrine. We have seen that the poorest persons are urged to marriage equally with the richest, by motives inherent in their institutions, and sentiments instilled into them from their birth. The only classes among whom the preventive check operates at all, are the priests of Fŏ, on whom celibacy is enjoined by their tenets, and the domestic slaves, whom the interests of their masters may occasionally prevent from marrying—though in the latter case we have seen that the law has stepped in with its interference in favour of increase. The positive checks are epidemics, starvation,* and infanticide, as far as the latter prevails. The general healthiness of the country is remarkable; but the Peking Gazettes occasionally bear testimony to the ravages of sickness in particular districts, often the consequence of previous famine, whether resulting from drought, inundation, locusts, or other causes. The Sacred Edict warns the people against "those years which happen from time to time, when epidemic distempers, joined to a scarcity of grain, make *all places desolate*."

The public granaries are very poor provisions against

* The ordinary wages of labour appear from the *Leu-lee*, to be equivalent to about sixpence a day, and this gives little more than a bare subsistence.

seasons of dearth, partly from the malversations and dishonesty of those who conduct them, and partly from their bringing the government into competition with the corn-dealer or factor, whose natural interest is much better calculated to equalize the prices of grain, and make the plenty of one year supply the dearth of another, than the artificial interference of the government. When rice is cheap, he is prevented from buying and storing it up; and its very cheapness occasions its undue consumption; just as if a ship's company should eat up two months' provision in one month. The free and unrestrained business of the corn-factor would provide by far the best public granary, though it might deprive the government of some part of the display and pretence of its paternal character. But the natural diffusion of food through *space* is equally restricted with its diffusion through *time*. As it is the policy of Chinese rulers to restrict the intercourse of different parts of the empire to inland navigation, a reference to the map will immediately show that the inland trade between some provinces on the coast is impeded by lofty mountains, where rivers take their rise, and where they are therefore unnavigable. The plenty of one province, accordingly, in such a bulky commodity as grain, cannot easily supply the want of another except by *sea:* and that channel is interdicted.

This inconvenience is sometimes so plain as to be discerned, and to lead to the removal of the impediments. An edict was issued by the emperor a few years since, of which the following is an extract:—"The viceroy of the two provinces of Fokien and Chĕ-keang has recommended a temporary relaxation of the restrictions on the coasting trade, and the holding out of encouragement to merchants to import grain from Chĕ-keang by sea. In the past year the harvest of rice in Fokien has been so bad as to

raise the price of grain to an unusual height. The same viceroy states that the harvest in Chĕ-keang has been comparatively plentiful, and the coasting navigation affords such facilities for transmission, that he recommends some relaxation of the restrictions upon it, as an encouragement to merchants to supply the wants of the people. Let this be done according to his recommendation, and let the treasurer of Fokien hold out encouragement to the merchants of the provincial capital and its dependencies to proceed to Chĕ-keang with proper licences, and import grain by sea. Let the lieutenant-governor of Chĕ-keang make known to the merchants of his province, that if they wish to transmit grain to Fokien they may receive permits from the treasurer for that purpose. Let them be allowed, after proper inspection, to proceed through the several seaports without detention or hindrance. When the price of grain in Fokien shall have sunk to its usual level, let the customary restrictions be resumed."

The impediments to free trade in the produce of the land arise partly from the principal revenues being derived from agriculture. A land-tax has from the earliest ages been the chief resource of the government. We learn from the book of Mencius* that in lieu of the present system, by which one-tenth, or less, is levied from the land, a mode formerly prevailed called *Tsoo* (assistance), by which the government obtained a ninth of the produce, or about eleven per cent. A certain portion of land was divided into nine equal parcels, of which one was reserved for the state, and the rest given to eight different farmers, who united in tilling the public field as a tax for their several portions.† This was considered as superior to all

* Shang-meng, ch. v.

† An ode in their Book of Songs says, "Let the rain descend first on our public, and then on our private fields."

other systems, on the ground of its constant equality, and just proportion to the variations of the seasons; but it was of course found impracticable in the long run, and the mode of taxation called *Koong* substituted, by which an average of several years' produce was made, and a tenth of this fixed as a permanent tax. "But," says Mencius, "although in years of abundance the fixed rate is small, yet in bad years, when the produce is deficient, he who should be the parent of the people injures them by taking the fixe d average amount." Our rent-charge in lieu of tithe, calculated on an average of the last seven years, remedies the evil noticed by Mencius in the permanent tax.

Some observations by Sir George Staunton, the translator of the Penal Code, in connexion with the present subject, deserve to be quoted at length:—"It has long been a disputed, and is still perhaps to be considered a doubtful question, whether the tenure by which the land is in general held in China is of the nature of a freehold, and vested in the landholder without limitation or control, or whether the sovereign is in fact the universal and exclusive proprietor of the soil, while the nominal landholder is, like the zemindar in India, no more than the steward or collector of his master. The truth probably lies, in this instance, between the two extremes. It is well known that several of the merchants who trade with Europeans at Canton have considerable landed possessions, and that they esteem those possessions to be the most secure, if not the most important, portion of their property. The missionaries resident at Peking, under the protection of the court, had likewise their estates in land granted them by different emperors for the support of their establishments. Besides, the ordinary contribution of the landholder to the revenue is supposed not to exceed

one-tenth of the produce—a proportion very different from that which is required from the ryots, or actual cultivators of the soil in India, and which leaves enough in the hands of the landholder to enable him to reserve a considerable income to himself, after discharging the wages of the labourer and the interest of the capital employed upon the cultivation of his property. . . . . As there are no public funds in China, the purchase of land is the chief, if not the only, mode of rendering capital productive with certainty and regularity, and free from the anxiety and risk of commercial adventure.

"On the other hand it must be admitted that the Penal Code clearly evinces that there are considerable deductions to be made from the advantages just mentioned; that the proprietorship of the landholder is of a very qualified nature, and subject to a degree of interference and control on the part of government, not known or endured under the most despotic of the monarchies of Europe. By the 78th section (of the Code) the proprietor of land seems to be almost entirely restricted from disposing of it by will. By the 88th section it appears that the inheritors must share it amongst them in certain established portions. By the 90th section those lands are forfeited which the proprietors do not register in the public records of government, acknowledging themselves responsible for the payment of taxes upon them. Allotments of lands even appear to be in some cases liable to forfeiture, merely because they are not cultivated when capable of being so.* By the 95th section no mortgage is lawful unless the mortgagee actually enters into the possession of the lands, has the produce thereof conveyed to him, and makes himself personally responsible for the

* But we have seen that they are sometimes given free of taxes, and with no other condition but that of cultivation.

payment of all taxes, until the lands are redeemed by the proprietor." * Thus the Chinese possess the benefits of a *public registry of real property*, which was established with a view to securing to the emperor his revenues from the lands.

We have seen that the capitation or poll-tax imposed by the Tartars was soon taken off again; and it was Yoong-ching, the second emperor of the dynasty, who, in order to avoid the trouble and uncertainty attending the collection of the land-tax from the tenants, ordained that it should ever after be taken from the landowners. In order to comprehend in any way the subject of the Chinese revenues, we must premise, that from the produce of taxation in each province the treasurer of that province deducts the civil and military expenses, and all outlays, whether for public works or otherwise, remitting the *surplus* to Peking either in money or kind. The difficulty, then, of ascertaining the real expense that attends the administration of the whole empire arises from this surplus being the only point that has been clearly ascertained; as well as from a considerable portion of the taxation being levied in *commodities*, as grain, salt, silks, and stores of different kinds. Whether this cumbrous and wasteful system arose from the want of a convenient circulating medium (in the absence of any gold or silver coin), or from some other cause, we will not pretend to explain; but it is deserving of remark that no small part of the allowances of public servants, especially at Peking, as well as of the stipends of courtiers and imperial relatives, is paid in the shape of *rations* and *supplies*. Without possessing, as it would seem, the means of an exact computation, Du Halde states that the total expense of the

* Appendix to *Leu-lee*, p. 526.

imperial government through the empire must be two hundred millions of taëls, or upwards of sixty millions sterling, of which only *twelve millions* are transmitted to Peking. The accuracy of the latter amount seems pretty nearly confirmed by what appeared in a Peking Gazette, dated November, 1833. A Tartar officer therein states that the whole receipts from land-tax, salt monopoly, customs and duties, &c.; do not exceed forty millions of taëls. This is twelve or thirteen millions sterling, and can of course mean *only* the revenue transmitted to Peking, after paying the expenses of the provinces; for a country eight times the size of France could hardly be governed for that sum. Again, it appears from a statement by Dr. Morrison that the surplus from land-tax transmitted to Peking by *two* provinces was *five* millions of taëls, which, taken as an average for eighteen provinces, would give forty-five millions; but one or two of them supply much below that average, and the true total may therefore be forty millions, as above.

With reference to the grain that is transmitted to the capital, Padre Serra informs us that it is laden in about ten thousand boats, each boat carrying eleven hundred sacks. In addition to the independence of sea-navigation, it was for the express purpose of securing this supply that the Grand Canal was constructed. One of its names is the "Grain-remitting River" (Yun-leang-ho); and the statement extracted by Dr. Morrison from a Chinese account of the Board of Revenue at Peking confirms the foregoing assertion of Padre Serra; for the actual number of grain-junks is there reckoned at 10,455. On quitting *Tien-tsin* in 1816, and proceeding towards the capital, the vast number of these vessels ranged along the southern bank of the river drew our attention. From about noon until late at night we sailed rapidly past an

unbroken line of them, anchored in a regular manner with their heads to the shore, and close to each other; the stern of every junk resting upon the side of the one immediately next to it down the stream. Each of them was said to carry above a hundred tons; but this must probably be beyond the average of their burthen, since it would give the enormous amount of more than a million tons in grain. It is likely that some of them are employed not exclusively in remitting grain, but that the silks, teas, and other tribute from the provinces are likewise laden on board. Tien-tsin is only about fifty miles from the sea: and an invading enemy, by reaching that point, might either take possession of the grain-junks, or destroy them, and thus starve the capital.

It is a rule on the canal that all private vessels should make way for the grain-junks, and the people in the latter sometimes abuse their privilege. "The late outrageous and violent conduct of those on board the grain-junks (said an edict of the present emperor in 1824), towards private merchants and individuals, has rendered it necessary to enact certain regulations for their future government and control.* The superintendent has reported that it has been the custom for every division of these vessels to employ the people of the province and district whence it came, as being the best skilled in the management of the vessels. This has given occasion to numbers of houseless vagabonds from distant parts to conduct themselves in a disorderly and unlawful manner, relying upon their great number for impunity. Let the headman in each vessel be made responsible, and let him be

* In the year 1848 some disbanded men of the Imperial grain-junks behaved so ill in the neighbourhood of Shanghae as to occasion considerable trouble to the English at that place, and very energetic measures were required on the part of the consul to secure their punishment.

compelled to return lists of his crew, as a check upon their conduct. Let the returns contain a description of the age, appearance, and other particulars of each person; and let every man have a badge or mark round his middle, in order that when the vessel comes to an anchor he may be duly registered. When the grain-junks enter any particular district, let the civil and military officers, attended by their soldiers and followers, resort to the spot, and exert themselves in quickening the progress of the vessels, as well as in the preservation of order." * A portion of the land-tax in grain is reserved, in each province, for the supply of the public granaries, to be sold at a reduced rate to the people in times of scarcity.

Another principal source of revenue in China, next to the land-tax, is the duty on *salt*, which yields a very large amount in consequence of the immense consumption of salted fish, as well as other provisions. The trade in salt is a government monopoly, farmed by a certain number of licensed merchants, who in point of wealth vied with those other monopolists; the late Hong merchants of Canton. This necessary of life is chiefly procured in the eastern and southern provinces on the coast, though they appear to have mines of rock-salt, as well as salt-springs. Large square fields in the marshes adjoining the sea are made perfectly level, with elevated margins. The sea-water is then either let in by sluices, or pumped in by the method commonly used in irrigation. The water, which lies on the surface to the depth of a few inches, is then evaporated by the heat of the sun. The huge stacks or rather *hills*, of salt, observed by our embassies at Tien-tsin, were calculated by Mr. Barrow† to contain 600,000,000

* Royal Asiatic Transactions, 4to. vol. i.

† "The number of entire stacks was two hundred and twenty-two, besides several others that were incomplete. A transverse section of

lbs., and occupied the north side of the river, or that opposite to the grain-junks; but these lay *above* the city, while the heaps of salt-bags lay *below* it on the river. We find from Marco Polo that a like revenue was derived by the Mongol emperors from this necessary of life.

In China no considerable quantity of salt can ever be removed except by a permit. There appear, from the Penal Code, to be similar restrictions attending certain government monopolies of both tea and alum* for home consumption. "Whoever is guilty of a clandestine sale of these articles shall be liable to the same penalties as in a clandestine sale of salt. †" Ginseng is another monopoly of the emperor. The collection of this root in Manchow Tartary is confined to the "eight banners," each division having a portion of territory allotted to it for the search of the medical treasure. That collected at Ningkoota used to be reserved for the sole use of the emperor and his family, the rest being distributed in rewards to officers and courtiers. Tickets or permits are given to those employed in collection, and severe punishments enacted against all such as presume to gather ginseng without licence. The Hong merchants used to be *compelled* to buy ginseng, whether they wanted it or not, to the extent of 120,000 taëls per annum. Several

each stack was found to contain seventy bags. None of these stacks were less in length than two hundred feet; some extended to six hundred. Supposing the mean, or average, length of those stacks to be four hundred feet, of which each bag occupied a space of two feet, there would then be in each stack two hundred sections, or fourteen thousand bags, and in the two hundred and twenty-two stacks upwards of three million bags of salt. Every bag contained about two hundred pounds weight of salt, and consequently, altogether, six hundred millions of pounds in weight of that article."

* It has been observed before that alum is used as a precipitate in clarifying the water of the rivers for use.

† Penal Code, sect. cxli.

mines of metals also afford a revenue. In Yun-nân is a river called *Kin-sha*, or "golden-sanded," some part of the produce of which is paid to the government.

Taxes on the transit of goods are another source of income to the emperor, as well as customs on imports and exports. A considerable addition to the prices of teas exported by us from Canton was made by the duties levied by the government at different passes between that port and the countries where it is grown. This was one of their main reasons for confining the European ships to Canton; for if we obtained the teas nearer to the places of growth and manufacture, all that was saved in the price to the purchasers would have been lost in the transit duty to the revenue. Besides these burthens, and the profits of the Hong merchants, were to be reckoned the regular and irregular charges levied by the Hoppo, or chief commissioners of customs. This officer was always a Tartar favourite of the emperor, selected from one of the three tribes about the court; and as many of them are distinguished by their *number* and not by their *name*, a former Hoppo of Canton (in 1828) was styled "His Excellency *Seventy-four*." It was the business of the Hoppo, in addition to amassing an immense private fortune from the European trade in the course of four or five years, to remit to Peking annually 1,470,000 taëls, or Chinese ounces of silver, and to make three presents to the emperor; one in the fifth moon, another on his majesty's birthday, and a third at the end of the year.* The whole amounted to about 800,000 taëls in value, and consisted principally of European articles obtained from the merchants. As the *foreigners* were those who ultimately paid these charges, the government had none of its ordinary scruples to restrain exaction.

* Padre Serra's Notices, Royal Asiatic Transactions, vol. iii. 4to.

The civil and statistical work,* abstracted by Dr. Morrison, after stating all the sources of income, proceeds to give the items of expenditure. It begins with the salaries and allowances in silver, grain, and silk, to the princes and nobles about the court, which have already been noticed in the eleventh chapter. The officers of government receive both pay and allowances, the pay being often a mere trifle, but the allowances on a liberal scale. The legal emoluments of the governor of a province are 15,000 taëls, or 5000*l.*, in silver, the value of which is much higher with them than with us. The treasurer of a province who collects and remits the land-tax, &c., has 9000 taëls. After paying the court, the civil service, and the army, the Board of Revenue has to issue relief to those districts of the empire which have suffered from drought, inundation, locusts, or earthquakes. The various sources of regular income appear to be inadequate to the necessities of the state, and hence the need of resorting to unacknowledged fees and assessments. "His present majesty on his accession," observes Dr. Morrison, "ordered all fees to be discontinued; but he did so by the advice of a novice. All the governors of provinces immediately memorialized, and declared the orders utterly impracticable. The emperor then turned round, confessed his inexperience, censured his adviser, and revoked the order."

It has been observed before that the Tartar soldiers are paid, in part, by grants of land. In western Tartary, parties of military, of 800 or 1000, are settled down to cultivate the waste lands, serving at the same time to control the native population. They generally produce grain enough for their own subsistence. Soong-ta-jin (the conductor of Lord Macartney) recommended that

* *Ta-tsing Hoey-tien.*

each man should have a piece of land given him as a perpetual inheritance; but the government objected, on the ground that he would neglect martial exercises to cultivate his private farm; and that region (they added) was too important to intrust to undisciplined troops. The Chinese troops settled towards the Russian frontier, from the Saghalian westward, are generally agriculturists. To a station on that river some criminals were sent, to be coerced by the regular troops, and to work for them. They behaved well, and the Emperor *Yoong-ching* (the third of the Manchows) forgave their crimes, and granted them lands. He remarked on that occasion, "It may be seen from this occurrence, that, if criminals have a path of self-renovation opened to them, there is reason to hope they will reform their vices and become moral."

Some mode of increasing its regular income attracted the serious attention of the government of China. In a Peking gazette,* dated the 11th of October, 1833, there appeared the result of deliberations between the several supreme boards, and that particular one which has especial charge of the revenue. They had formed a committee of ways and means, and the object was to increase the income for current expenses, because, during the last few years, the outlay had exceeded the receipts by more that thirty millions of taëls. They were, in short, employed upon the great problem of government, which has been thus defined by Voltaire—"à prendre le plus d'argent qu'on peut à une grande partie des citoyens, pour le donner à une autre partie." The defalcation is attributed, and with apparent reason, to the suppression of two rebellions among the Mahomedan Tartars, adherents of Jehanghir Khojah, and to the inroads of the Meaou-tse, north-west of Canton. But besides these

* Chinese Repository, vol. ii. p. 430.

sources of expense, there has been an unprecedented train of calamities in the shape of deluge and drought, making it necessary to remit large amounts of land-tax in different provinces; while the repairs of the Yellow River, and its neighbouring streams, drained both the general and provincial treasuries. Expense was thus increased, at the same time that income was diminished. At length came the crowning disaster of the war with England, which, besides its inevitable expenditure and losses, imposed an indemnity of 27,000,000 dollars, including the Canton ransom.

The expedient that was adopted for raising money, being directly contrary to what may be termed the leading principle of the Chinese system, that of eligibility to office by learning and talent alone, might perhaps be considered as boding ill to the actual rulers of the country. The rank of *Kiujin*, which qualifies for employment, and, by the fundamental law of the country, should be attainable by no other road than that of approved learning, has been *sold for money*, as offices in France were under the old régime. But so opposed is this to the universal sentiment of the empire, and to the expectations of the proper candidates for employment, that a short limit is set to the period of its exercise. On the occasion in question the term was restricted to about nine months. The system is considered altogether bad. Many of the old purchasers remain unemployed; and those who get into office, having bought their places, deem it but fair to repay themselves as fast as possible from the people. Various other expedients have been proposed; some were for opening the mines; some advised raising the price of salt; others recommended that rich merchants and monopolists should subscribe for the wants of the state. It has been already mentioned that one or two of the late Hong merchants

obtained the decoration of the peacock's feather for contributing a round sum towards the military operations against the mountaineers. The present government of the country is evidently hard pressed for means, and distressed by any unusual draft on its resources.

Although, as we have before endeavoured to demonstrate, the very different condition of China in respect to wealth and prosperity has argued a system of government much superior to what prevails under other Asiatic despotisms; although, as long as we are to judge of the tree by its fruits, a large share of good government *must* have been the general rule; it is evident that the rule is without its exceptions. The emperor—the theoretical father of his people—does not find it so easy *openly* to impose new taxes as his necessities may require them; and his power, though absolute in name, is limited in reality by the endurance of the people, and by the laws of necessity. Our own country has proved the fact of the largest amount of direct taxation being levied under a limited monarchy, and through the delegates of the people themselves; and the English House of Commons has done a great deal more than the Emperor of China could probably *attempt* with safety. He is therefore obliged, to a certain extent, and on particular occasions, to let functionaries pay *themselves*—the worst possible form of taxation. The real amount levied in this manner from the people becomes greater than the nominal, and the excess is incalculably more mischievous than if fairly and directly obtained. In reference to this system and its consequences, the Chinese have a saying, that "the greater fish eat the smaller; the smaller eat the shrimps; and the shrimps are obliged to eat mud."

CHAPTER XXIII.

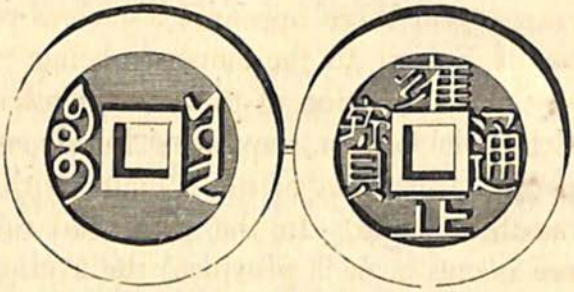
COMMERCE.

Coinage of base metal — Silver passes by weight — Paper currency — Pawnbroking — Interest of money — Internal commerce — Disadvantages of Canton for English trade — Origin of Hong merchants — Imposts on foreign shipping — Linguists — Smuggling — Trade in opium — New law against it — Black teas — Green teas — Preparation of tea — Spurious green teas — European tea-trade — Increase of English trade since 1842.

THE government of China issues no other coin than the base metal *Tchen*, composed of copper and zinc, with perhaps some lead, and in value considerably less than the tenth part of a penny.* On one side is the title of the reigning emperor, with two words denoting "current value," while the reverse bears a Tartar inscription. In the centre of each of these coins is a square hole, through which they are strung together by hundreds to save counting, and in this state look something like strings of sausages. Many years ago, a specimen of a single coin having by some chance been dropped in an unfrequented part of the United Kingdom, the person who picked it up carried the mystery to a learned antiquary, who having written a long essay on the subject, in which every conjecture was hazarded but the true one, a representation of the strange coin, with the essay

* It appears that the white shells called *cowries* have been, and perhaps still are, in use as a medium of exchange about the provinces bordering on India and Ava, particularly Yun-nân. They are called by the Chinese *hae-fei*, "fat of the sea," and three of them seem to have been exchanged for one copper coin.

appended, was published in a standard work of some eminence. With a view to diminish the chance of such a mistake for the future, a facsimile of the coinage of one of the Manchow emperors is here given :—



The curious, as in other countries, make collections of the ancient copper coin, in the order of succession of the reigns under which they were issued. It is said, however, that there are fabricators of these, as well as of numerous other antiques, of which the Chinese are so fond. A series mounting up beyond the Christian era has been brought to England; and if a string of *tchen* taken at hazard be examined, it will often be found to contain some coins of an ancient date. During former periods of Chinese history, money seems to have been made of other materials besides copper, being coined into a great variety of shapes, with symbolical figures of various animals. So greatly has the current coin of the reigning dynasty been debased compared with its nominal value, that the greatest difficulty is experienced in repressing the practice of forging it. In the Peking Gazette for June, 1824, there is the confession of a convicted forger, who declares that, "being in great want, he, in concert with a former acquaintance, agreed on a plan for counterfeiting old worn-out *tchen* by casting lead, which being smuggled into circulation, they were to share the profits. They

procured a stone and made a mould for the coin, and, their instruments being ready, they hired an empty apartment attached to a temple, and there coined upwards of 7000 tchen; but soon after putting these in circulation they were seized with all their tools."

In the same year there appeared a curious paper from the viceroy of Fokien to the emperor, being "A report concerning the depreciation of the current *tchen* in comparison with silver bullion, requesting the imperial assent to a temporary suspension of the coinage, with a view to prevent needless waste. In the provincial mint (for it seems there is one in each province) the average coinage of ten days had been 1200 strings of *tchen* (each string containing 1000, or ten divisions of 100 each), and therefore the total coinage of one year averaged 43,200 strings or 43,200,000 *tchen*), the use of which had been to pay the militia of the province. In order to procure the copper and zinc required for coinage, officers had been regularly deputed to Yun-nân and Hoo-pŏ; and it was calculated that the expenses of transmission and coinage, added to the cost of the metal, had amounted, on an average, to 1 taël and 261 parts (in silver) for every 1000 *tchen*. But the present market value of fine silver, in exchange for the coin, was only 1 taël weight for 1240 *tchen*; this difference being added to the above, the total disadvantage amounted to more than 500 parts in each taël, and the annual loss in the province to 20,000 taëls." To understand this, it must be observed that 1000 *tchen* ought to purchase or represent 1 taël of fine silver, but that more than 1500 were now required for that purpose, including the first cost of the coin to the government.

The viceroy then alludes to an inconvenience arising from the bulk of the base metal coin, in comparison with its value; in which respect it somewhat resembles the

iron money of Sparta. "The province of Fokien," observes the Chinese functionary, "being on the borders of the sea, its distance from some other provinces is great; and the merchants who resort hither with their goods, finding it inconvenient to carry back such a weight of coin, exchange it for silver as a more portable remittance; in consequence of which silver and copper coin have become very disproportioned in their relative values; the former rising, and the latter falling to an unusual degree. It has always been the rule (he adds) to pay the militia in coin, at the rate of 1000 for a taël of silver; but now a taël of silver in the market being worth 1240 *tchen*, they experience serious loss from this when they exchange their coin for silver, with a view to the more ready transmission of their pay to a distance." The remedy proposed by the viceroy was, that the mint should be shut, and all farther coinage suspended; the militia receiving their pay in silver until the relative values of silver and *tchen* approached nearer to a par.

The only coin of the country being copper, it follows that all transactions, beyond mere daily marketing and the lowest class of payments, must be carried on by a *weight* of silver, of which the taël expresses one Chinese ounce, divided decimally into 10 *mace* (in the language of Canton), which are still farther divided into 10 *candareens* —the names of weights and not coins; so that 10 copper *tchen* should, in exchange, equal 1 *candareen* of silver; 100 should equal 1 *mace;* and 1000 should pass for 1 taël; though, from the paper before quoted, it seems the exchange *varies* between copper and silver. It has appeared impossible to establish a silver coin in the country, from the unconquerable propensity of the people to play tricks with anything more valuable than their base copper money: indeed, we have seen that they forge even *that.*

On the introduction of Spanish dollars in commerce, they were at first found to be so convenient, that the coinage of dollars in imitation was for a time allowed; but though these commenced at a higher rate than the foreign dollars, they soon sank greatly below the standard, while the foreign coin preserved its wonted degree of purity.* The manufacture of imitation-dollars, being now prohibited, is still carried on to a considerable extent. Some are alloyed with lead, while others are made of base metal and coated with silver. The Spanish dollars imported at Canton very soon became punched into such a state, with the private marks of all those through whose hands they passed, as to be saleable only by weight. The fraudulent Chinese even introduce bits of lead into the punch-holes, and none but freshly-imported dollars can ever be received but with a very strict examination called shroffing.

The smallest payments in the interior, if not made in the copper *tchen*, are effected by exchanging bits of silver, whose weight is ascertained by a little ivory balance, on the principle of the steelyard. The astonishing inconvenience of such a system might have been expected to lead to a silver coinage; but it still continues, and in this want of a circulating medium may perhaps be sought the real cause of so much being effected by barter, as well as of the payment of a considerable portion of taxes and rents, and other obligations, in produce instead of money. Those payments to government which are not made in kind are in silver of a prescribed rate of fineness. This is cast in stamped ingots of one and ten taëls in weight, of which ninety-eight parts in one hundred must be of pure silver, the alloy being therefore only two per cent. The *Sysee*, as it is called at Canton, paid in exchange for opium, and sent home in considerable quantities to this

* Chinese Commercial Guide, p. 64.

country, is of the same description of bullion; and as it was found, on assay at the Bank, to contain a considerable admixture of gold, which the Chinese had not been able to detect or separate, it has proved very profitable to the importers, raising the premium on *Sysee* in China to five or six per cent. With the imperfect means that exist there of ascertaining the real quality of the bar-silver received in exchange for opium, it is only surprising that it should have turned out rather *above* than *below* the stipulated value.

Besides the inferior grade of pawnbrokers, there are in every considerable town a respectable class of what are called "money-shops," approaching in some degree to our private banking establishments. Officers charged with the collection of the revenue deposit with these the receipts on account of taxes and duties; and the money-shop is paid by a liberal allowance for waste, in melting and reducing the silver to the quality of government *Sysee*, for the purity of which it is responsible. "Taxes are generally handed over to them by the government; mercantile duties are frequently paid into their banks by the merchants from whom they are owing; and the banker in such case gives the merchant a receipt for the amount, accompanied by a certificate that it shall be paid to government within a certain period. The refined silver is cast into ingots, and stamped with the name of the banker and date of refining. Should any deception be afterwards discovered, at whatever distance of time, the refiner is liable to severe punishment. . . . . From private individuals these banks either receive deposits drawable at will, in which case no interest is allowed, or they take money at interest not exceeding twelve per cent., in which case some days' notice must be given before any portion can be withdrawn. They do not appear to differ

materially in any respect from similar establishments in Europe; but there are no chartered or privileged banking companies. Paper money has formerly been issued by the government, but is not now known," * except as private notes, invented by merchants for mutual accommodation. On our first resort to Foochow-foo they were found extremely common, and bore the endorsements of all those through whose hands they had passed.

Allusion was made, in the first chapter, to the paper money issued by the Mongol conquerors of China, as mentioned by the Arabian traveller, Ibn Batuta, who states that all the silver coin had vanished from the circulation, and been melted down, in consequence of the depreciation which took place in the paper from over-issues. Marco Polo gives the following distinct account of the same paper money:—"In this city of the Kambalu is the mint of the Grand Khân, who may be said to possess the secret of the alchymists, as he has the art of producing money by the following process: he causes the bark to be stripped from those mulberry-trees the leaves of which are used for feeding silkworms, and takes from it that thin inner rind (*liber*) which lies between the coarser bark and the wood of the tree. This, being steeped and afterwards pounded in a mortar until reduced to a pulp, is made into paper, resembling that which is manufactured from cotton, but much darker. When ready for use, he has it cut into pieces of money of different sizes, nearly square, but somewhat longer than they are wide. Of these, the smallest pass for a denier tournois; the next size for a Venetian groat; others for two, five, and ten groats; others for one, two, three, and as far as ten *besants* of gold. The coinage of this paper money is authenticated with as much form and ceremony as if it were actually of

* Chinese Commercial Guide, p. 66.

pure gold or silver; for to each note a number of officers, specially appointed, not only subscribe their names, but affix their signets also; and, when this has been regularly done by the whole of them, the principal officer deputed by his majesty, having dipped into vermilion * the royal seal committed to his custody, stamps with it the piece of paper, so that the form of the seal tinged with the vermilion remains impressed upon it; by which it receives full authenticity as current money, and the act of counterfeiting it is punished as a capital offence.

"When thus coined in large quantities, this paper currency is circulated in every part of his majesty's dominions, nor dares any person at the peril of his life refuse to accept it in payment. All his subjects receive it without hesitation, because, wherever their business may call them, they can dispose of it again in the purchase of merchandise they may have occasion for. . . . When any persons happen to be possessed of paper money which from long use has become damaged, they carry it to the mint, where, upon the payment of only three per cent., they may receive fresh notes in exchange. Should any be desirous of procuring gold or silver for the purposes of manufacture, such as of drinking-cups, girdles, or other articles wrought of these metals, they, in like manner, apply at the mint, and for their paper obtain the bullion they require. All his majesty's armies are paid with this currency, which is to them of the same value as if it were gold or silver. Upon these grounds it may certainly be affirmed that the Grand Khân has a more extensive command of treasure than any other sovereign

* This is exactly the mode of sealing at the present day. Keying sealed with myself the convention at Boca Tigris, on board the 'Vulture' frigate, in 1846, with his seal of office as Imperial Commissioner, being a solid cube of the purest gold, measuring about two inches every way.

in the universe."* When Marco wrote, it is probable that the abuse of the system had not taken place, and that the paper money still retained its credit. He seems to have thought that the issue might be unlimited.

The shops of pawnbrokers are at present very numerous in China, but they are under strict regulations, and any one acting without a licence is liable to severe punishment. The usual period allowed for the redemption of the pawned goods is three years; and this, being compulsory on them by law, is said to be injurious, as the pledges must often lose their value by the length of time. The highest legal rate of interest on deposits is three per cent. per month; but in winter months, the money advanced on wearing apparel may not exceed two per cent., on the alleged ground that poor persons may be able the more easily to redeem. These pawn-shops have the usual effect, at Canton, of affording facilities to thieving; and it is only surprising that native servants have been there found so generally honest under all the circumstances. The Chinese principle of *responsibility*, however, comes into play, and becomes the more necessary on account of the facility of escape beyond the reach of any European. No native servant is hired by prudent persons without being *secured*, that is, without some trustworthy individual being responsible for him; and so perfectly familiar and habitual is this to all, that they recognise the obligation in its fullest extent, and violate it less often than might be expected.

The legal limit to the rate of interest is three per cent. per mensem, and thirty per cent. per annum; but this of course is very seldom reached, except in pawning, and other such short loans. Whatever number of years may have elapsed, the government does not enforce any claim

* Marsden's edition, p. 353.

for interest accumulated beyond the amount of the principal, or, in Chinese phrase, "the offspring must not be greater than the mother;" * and all compound interest is unlawful. The ordinary rate of interest at Canton is from twelve to fifteen per cent., which alone seems very high, and must be ascribed to the scarcity of large capitalists in a country where the subdivision of property is carried so far, as well as to the general insecurity of loans. Where the nature of private credit is not very good, the system of lending on *pledges* prevails more generally, as it does in China, and pawnbroking ascends much higher in the scale of the community; just as Lombard-street was once composed of pawnbrokers' shops. According to the *Mémoires sur les Chinois*, † the motive of the government in legalising such a high rate of interest as that above stated is "partly to facilitate loans, and partly to discourage luxury and prodigality, by hastening the ruin of such as borrow merely to spend."

Sir George Staunton, in a note to his translation of the Chinese law of usury, accounts in the following manner for the high limit fixed by the code: "The rate of interest upon a pecuniary loan must, generally speaking, be influenced by a two-fold consideration. Besides what is considered to be strictly equivalent to the advantage arising from the use of the money, the lender must be supposed, in most cases, to receive likewise a certain compensation for the risk to which he exposes his principal. The former consideration will always be limited by, and bear a certain ratio to, the peculiar state and degree of the general prosperity of the country; but

* This idea is not peculiar to China: "Que de *filles*, O Dieu, mes pièces de monnoie ont produites! Voyez, la plupart sont déjà aussi grandes que leurs *mères*."

† Vol. iv. p. 299.

the latter can evidently be determined by no rule or proportion which does not include the consideration of the relative situation and circumstances of the parties interested in the transaction. In England, indeed, where the security of property and the exclusive rights of individuals are so well understood and so effectually protected by the laws, it may in general be almost as easy to guard against risk as to compensate for it. But in China, where the rights connected with property are comparatively vague and undefined, and, being distinct from the source of power and influence, are less the object of the law's regard—where, owing to the subdivision of property, there are few great capitalists—and where also there is but little individual confidence, except between relations, who, holding their patrimony in some degree in common, can scarcely be considered as borrowers or lenders in the eye of the law—it is not so surprising that it should be deemed expedient to license in pecuniary transactions the insertion of stipulations for very ample interest; and in point of fact there is no doubt that the law in this respect, indulgent as it is, is frequently infringed upon.

"In a state of things so unfavourable to the accumulation and transfer of property there cannot at any time be much floating capital; and the value of that capital, as far as it is denoted by the interest which it bears, it is natural to expect will be high in proportion to its scarcity: in other words, where there are many borrowers and few lenders, and where it forms no part of the system of government to grant to the former any peculiar degree of protection or encouragement, it seems a necessary consequence that the latter will both demand and obtain a more than ordinary compensation in return for the use of their property. Trade, therefore, as far as it requires

such aid, cannot be so extensively carried on as it is in those countries in which, there being more available capital, that capital is procurable at a cheaper rate, and accordingly a smaller return of profit is found adequate to the charges of commercial adventure."

The *internal* trade of a vast country like China, governed on such exclusive principles, must of course constitute the principal part of its commerce. The European trade at Canton and the other four ports is not very considerable when compared with the extent of the empire and the amount of its population; and the foreign intercourse that is carried on in native junks is limited by the imperfections of nautical science and skill, as well as by the unfitness of the vessels themselves, and the discouragement to all external adventure. The visits of the junks to neighbouring countries do not extend beyond Japan to the north, the Luconian islands to the east, Batavia to the south, and the Straits of Malacca to the west. To Japan they sail in June and July, taking their departure from Ningpo and Amoy, laden with silk piece-goods, china-ware, and sugar, together with drugs, as rhubarb and ginseng; to which is added the sandal-wood imported before from India and the South-sea Islands, in English and American ships. To Luconia they take a variety of goods, bringing back nothing but rice or dollars. Between China and Batavia, a junk never sails either way except in the favourable monsoon, quitting its own shores in February or March, and returning in July. The exports are tea, china-ware, and drugs of various kinds, in return for what is called at Canton "Straits produce," as areca-nuts, rattans, edible birds'-nests, pepper, &c. Within a late period a considerable trade in junks has originated with Sincapore, interfering probably with that formerly carried on with Batavia.

It has been remarked that raw produce of all kinds has generally found a better market in China than foreign manufactured goods. Those laws which forbid the use of things not sanctioned by custom, added to the usual pride and self-sufficiency of the people, are a bar in most cases to the extended consumption of European manufactures. It is enacted in the Penal Code, that "the houses, apartments, vehicles, dress, furniture, and other articles used by the officers of government, and by the people in general, shall be conformable to established rules." * The translator observes in a note, "It is certain that, generally speaking, the pleasure which the possessor of superior wealth may be supposed to derive from the display of it, a Chinese, whatever his situation, is in a great measure, if not wholly, prevented from enjoying." It is rather in the necessaries than the superfluities of life that they generally deal, and that great variety of climate within the empire, which makes the northern and southern provinces dependent on each other for supplies, renders the whole country at the same time independent of foreigners. The south provides the great staple of rice, as well as sugar; the east furnishes silk, cotton, and tea; the west metals and minerals; and the north, furs, and a variety of drugs whose growth is unsuited to a warmer climate.

The transit-duties on this internal commerce afford a very considerable revenue to the government, and were perhaps first suggested by the expense of constructing the Grand Canal. They now extend to nearly all articles of consumption, and it has been calculated that the addition made to the price of tea, at Canton, by government charges, as well as by the long and laborious carriage from the provinces where it is grown (but from which we were until lately

* *Leu-lee*, sect. 175.

interdicted), amounted to 150,000*l.* on black teas alone. The labour and expense of transport, independently of the duties, may be gathered from the description of the difficulties encountered by the boats of the embassy of 1793, in passing up the river towards the frontier pass of Chĕ-keang province. "After seven days of tedious navigation," says Barrow, "if dragging by main strength over a pebbly bottom, on which the boats were constantly aground, and against a rapid stream, could be so called, we came to its source near the city of Chang-shan Hien." The same difficulties are experienced up the other stream, in Keang-sy, towards the Mei-ling pass. As we ascended the river in 1816, files of men stood with large iron hoes on each side of the boats, scraping a channel for them through the pebbly bottom.

"We are confined at Canton," it was observed before the war, "to a single port of a single province—that single province divided from the rest of the empire by a barrier of high mountains, and chosen purposely by the Chinese government as the point farthest distant from the capital. In order to be consumed at Peking, where the coldness of the climate would render them most useful, our woollens must travel a distance of 1200 miles, and cross the mountainous barrier, at the foot of which they are unladen from boats, and carried on men's shoulders across the pass called Mei-ling. The consequence is, that only one-ninth of our woollen exports is consumed in the northern provinces, including the capital, as proved by Mr. Ball, who, after much minute inquiry, demonstrated the advantages that might accrue to our trade, could the Chinese government be persuaded to admit us to a port farther north, and nearer to the tea-provinces. He clearly proved, what might always have been surmised, that Canton from its geographical situa-

tion was 'of all other ports the most unfavourable to European trade.' Our metals, as they will not bear the expense of transport, are almost entirely consumed in the province where they are landed; and hence their very limited amount." But the expense of carriage was only a part of the disadvantage, for to that must be added the government-dues. "It is not to be supposed," observed Mr. Ball, "that any reduction can be effected in the transport-duties. The Chinese are unlikely to grant privileges to foreigners which necessarily entail a loss on themselves." *

The policy of the Tartar dynasty, in having been the first to confine the European trade with such obstinacy to a point so unsuited to its extension, might be explained on two grounds: first, the desire to remove the danger of external involvements from the vicinity of the capital; secondly, as above, to derive the largest possible revenue from internal transit. The direct annual revenue accruing from Canton was ascertained to exceed 1,200,000 taëls on *imports* alone; but this bore no proportion to other gains of an indirect nature.† Contributions were exacted from the Hong merchants under various names, as "Uses of the army," "Yellow River," "Imperial tribute," &c.: and the *Consoo* fund, at first intended as a provision for

* It was a stipulation in our treaty that the inland transport or transit duties should not exceed the amount actually existing in 1842; but this, of course, has been the most difficult point to maintain, and even to ascertain.

† The true way to estimate the importance of the foreign trade to the Chinese is rather by the quantity of tea and silk exported than by that of imports from abroad. Were the millions of pounds-weight annually taken away of an article like tea, into whose manufacture human labour enters so largely, thrown back on their hands, the consequences would be disastrous. We must include, besides, all the labour and capital employed in transporting it by land from great distances.

defraying the debts of bankrupt Hongs, was a rich source of revenue to the Chinese, as well as a heavy loss to our own trade; besides which, the inferior offices of the customs at Canton, being farmed out, were necessarily maintained by irregular charges on European commerce.

As the Consoo fund owed its origin to the particular constitution of that set of monopolists called Hong merchants, it is proper to observe that this body and their privileges (now happily extinct) originated as much in the peculiar policy of the government as in the cupidity of the individuals themselves. The pride and jealousy of the rulers of the country kept them studiously aloof from a direct intercourse with foreigners, finding it most convenient to throw the trouble and responsibility of managing persons, of whom they stood in great fear and dislike, on subordinate delegates, and to practise their impositions through this inferior channel. The Hongs consisted of eleven individuals, of very different degrees of wealth and character; they did not form a joint-stock company, but were licensed to trade individually; although the whole body was, until the year 1830, liable for all the foreign debts of each member. This liability was then very much relaxed, as it was found that such a responsibility on the part of the body had given to the poorer members a degree of credit, and a facility in obtaining loans from Europeans, which had been the principal cause of the numerous bankruptcies, either real or fraudulent, among the indigent or improvident Hongs. In the year 1837, as already detailed in the fourth chapter, a fresh claim was raised by the foreigners against two bankrupt Hongs, to the amount of about three millions of dollars; and after much trouble the Consoo became liable for the payment, but with an extended term of between eight and

ten years. This immense debt was paid at once out of the indemnity received for the war.

The Consoo fund, whence such large sums were drawn in the liquidation of debts incurred by ruined or dishonest merchants, was derived from charges amounting to about three per cent., laid by the body of Hong merchants on foreign exports and imports; and hence it became a severe burden on the fair trade of Canton. Instead of being allowed to terminate with the liquidation of the debts for which they were first levied, it seems that these charges continued in full force, and served to meet the increased demands of the government on the Consoo. Under these circumstances, there could be no room for surprise at the pertinacity with which the provincial authorities supported a monopoly so profitable and convenient to themselves; and by means of which they could benefit at the expense of Europeans, without coming into direct collision with a race who were not disposed to accord those acts of deference and homage so grateful to the pride of Chinese rulers.

But, in addition to the duties levied, the port-charges and other expenses attending shipping in the river were extremely heavy. The old routine of a vessel's arrival, and her preliminary arrangements, were as follows. On nearing the coast from the southward, the Ladrones, two small but lofty islands, was first made. A point lying south-east of Macao, called *Cabrita* by the Portuguese, was then passed; and off the town is an exposed anchorage of from three to four fathoms. Ships sent their boats ashore at Macao for a Chinese pilot, who was not often procured until the next morning; and therefore, when the weather was bad, vessels ran up at once to Lintin for shelter. The charts constructed at the charge of the East India Company afforded ample directions for piloting a ship to

Whampoa; and the pilots were only fishermen, employed by those who understood nothing of the business themselves, but who took out a government licence, and who thus enjoyed a monopoly in return for the responsibilities which they incurred; for, if a ship misbehaved the pilot was bambooed. Without a pilot no merchantman was allowed to pass the batteries at the entrance of the river.

On anchoring at Whampoa, about ten miles below Canton, two boats from the officers of the local authorities hooked on astern of each ship. It was their business to act as spies on the vessel, and to prevent smuggling and other illegalities. A comprador, or purveyor of provisions, was generally hired; but a fee of fifty dollars was in any case paid, to meet the extortions of the mandarins. It is stated in the Chinese Commercial Guide of that time, that, when a shipmaster or supercargo did not hire a factory at Canton, the further sum of ninety-six dollars was disbursed, to pay the demand of the custom-house people for a house comprador. In some cases this was paid by the *security*-merchant of the ship, and he found means of reimbursing himself in his transactions with the agent or master of the vessel. This security-merchant was always one of the Hongists, held responsible for the payment of all fees and duties connected with the ship, as well as for the conduct of every European or other foreigner on board. These details are interesting, as they show what we gained by the war, and will one day be scarcely credited.

Another functionary remains to be mentioned, under the name of *linguist*, who seemed to be so called rather on account of the absence, than the presence, of those accomplishments which are usually implied by the term; for these persons could not write English at all, and spoke it scarcely intelligibly. "The linguists (observed the

Commercial Guide), like the Hong merchants, are obliged to pay largely for their licences, and are besides liable to heavy exactions, chiefly from the underlings of office, as the Hong merchants are the prey of the higher officers. They also have the same difficulty in obtaining leave to retire from business, though in a less degree. The Hong merchants are required to be sureties for the linguists before the latter can obtain their licences. The business of the linguists is to procure permits for delivering or shipping cargo, to transact all affairs with the custom-house, and to keep accounts of the duties and port-charges; and every ship is compelled to pay 173 dollars, or about 40*l.*, as a fee to its own linguist. Some time after reaching Whampoa, each vessel is *measured* by the Hoppo's officers, for the levying of the port-charges. On a ship of 850 tons, these charges, in addition to the various disbursements above stated, amount altogether to nearly 5000 dollars, or between 800*l.* and 1000*l.* sterling."

It is clear that such heavy exactions must have held out the strongest inducements to all ships, but especially small ones, on which they fell the heaviest, to evade them if possible; and to the influence of this cause, joined to the contraband nature of the opium-trade, was to be ascribed the rapid growth of the smuggling dépôt at Lintin, which commenced about the year 1822. As if to give an additional impulse to the increase of this smuggling station, the Chinese government, in consequence of the scarcity of rice in 1825, enacted that ships bringing rice, and *no other goods*, should be exempted from the port-charges at Whampoa. Vessels accordingly stationed themselves at Lintin, below the mouth of the river, laden with rice, which they sold in sufficient quantities to other vessels newly arrived to exempt them from those port-charges; while the real cargoes were either left at

Lintin to be smuggled in, or put on board other ships which filled themselves up entirely on freight for Whampoa. It is clear that this extraordinary advantage in favour of rice must have operated against the importation of foreign manufactures in fair trade.

Cargo-boat.

It was observed at Canton, soon after the commencement of this strange system, that, "if the illegal commerce should continue to increase, through the abilities of the natives as smugglers, and the extreme corruption of the lowest custom-house officers, whose duty it is to put them down, there is every probability that the illicit traffic in this country will arrive at a height to interfere most materially with the revenues derived from foreign trade, and the emoluments which the government have previously obtained from it. Cargoes are now constantly carried down in ships from Whampoa to other ships, at an appointed rendezvous among the islands, where the goods are transshipped, and all port-charges thus evaded by the vessel which receives them. Under any other

than the existing system (in 1826) it may be supposed that the trade to China would become nearly a smuggling traffic altogether, until the government of the country were compelled to resort to extreme measures for the protection of its own interests." After the opening of the trade the experiment began to have a fair trial. The provincial authorities in 1834 betrayed considerable alarm at the increase of the smuggling system at Lintin, and this alarm was no doubt founded, first, in the evils arising from the lawless, independent, and violent habits which such a system engendered; and, secondly, in the prospect of a decrease or annihilation of the revenue derived from the fair trade.

The 'Chinese Commercial Guide' printed about that time observed, "The opening of the China trade to British shipping will probably, so long as the present vexatious restrictions continue in force at Whampoa, lead to such an increased amount of general trade at Lintin as to require dépôts for other goods besides opium. Such goods are now brought to Lintin by vessels not entering the port; and by vessels which, to avoid the measurement and other charges, enter as *rice-ships*. These goods are variously disposed of, some being sold to the native smugglers outside, and some brought to Whampoa in other foreign vessels." It was the universal corruption of the government officers of Canton, in the article of opium, that made it so difficult to stop the rest of the contraband trade near that port. On other parts of the coast the attempts to smuggle were not often successful. The 'Commercial Guide' observed, "The control of the government over the people is too oppressive to permit them to run the risk of purchasing except where they can obtain large profits. Hence *opium* is chiefly in demand; while even rice, though carried to the thickly-peopled and almost

barren districts of the coast of Fokien, has never found a ready or remunerating market."

The progress of time alone could show if greater success was to be expected, in the attempts to introduce European manufactures on the east coast, than had attended recent experiments. The late Dr. Morrison observed, as far back as 1823, that "the opening of any ports to the north (eastward) for the resort of European ships is not a likely occurrence while the present rulers of China reign. They will not even allow tea to be carried coastwise to the south, from the ports near to the places of growth, lest the traders should carry their cargoes to European ships or ports, and so deprive government of the revenue arising from the inland carriage; but most of all lest a 'traitorous intercourse' with Europeans should be opened, and the tea get into the possession of the English without passing through the Canton custom-house." Down to the year 1840 the opium smuggling on the coast gradually increased, until its exclusion from Canton by Commissioner Lin drove the whole of it to the eastward. At that time it appeared to be carried on with great profit in armed ships, one of which was said to carry fourteen guns; and conflicts occasionally took place in which lives were lost. With all this, however, European manufactures were as unsaleable as ever!

In the experimental voyage of the 'Amherst' we have before* seen that, after a cruise of six or seven months along the whole coast, even to the neighbourhood of Peking, nearly the entire quantity of the few articles shipped were brought back as they went. Experiments were soon afterwards made by private individuals in imitation of the Company. A small vessel sold some opium in 1832, and proceeded as far as a port in Fokien.

* Vol. i. p. 107.

The supercargo in vain sought some channel of trade; his views were frustrated by the vigilance of the government. He observed, on his return, through the local newspaper of Canton, "My mind is made up that, until some important change in the relations of the two countries takes place, the only chance of pushing English manufactures on that coast is by having them as a small item in an opium cargo." Another small vessel proceeded up to the Yellow Sea, and even touched on the coast of Tartary, but her endeavours to trade were generally fruitless. A Mr. Gordon, who was despatched from Bengal to procure tea-plants from the neighbourhood of the provinces where they are cultivated, saw a great deal of the attempts to trade on the coast; and he was of opinion that, without the consent of the Chinese government, any prospect of an advantageous or creditable intercourse did not exist.

The engrossing taste of all ranks and degrees in China for *opium*, a drug whose importation has exceeded the aggregate value of every other English import combined, deserves some particular notice, especially in connexion with the revenues of British India, of which it forms an important item. The use of this powerful narcotic became as extensive as the increasing demand for it was rapid from the first. The contraband trade was originally at Macao; but we have already seen that the Portuguese of that place, by their shortsighted rapacity, drove it to the island of Lintin, where the opium was kept stored in armed ships, and delivered to the Chinese smugglers by written orders from Canton, on the sales being concluded, and the money paid, at that place. From the following statement it will be seen that, while the quantity imported into China increased more than five-fold, the average price fell to about one-half:—

Year.	Chests.		Dollars.	Total dollars.
1821	4,628,	average price	1,325	6,132,100
1825	9,621	„	723	6,955,983
1830	18,760	„	587	11,012,120
1832	23,670	„	648	15,338,160

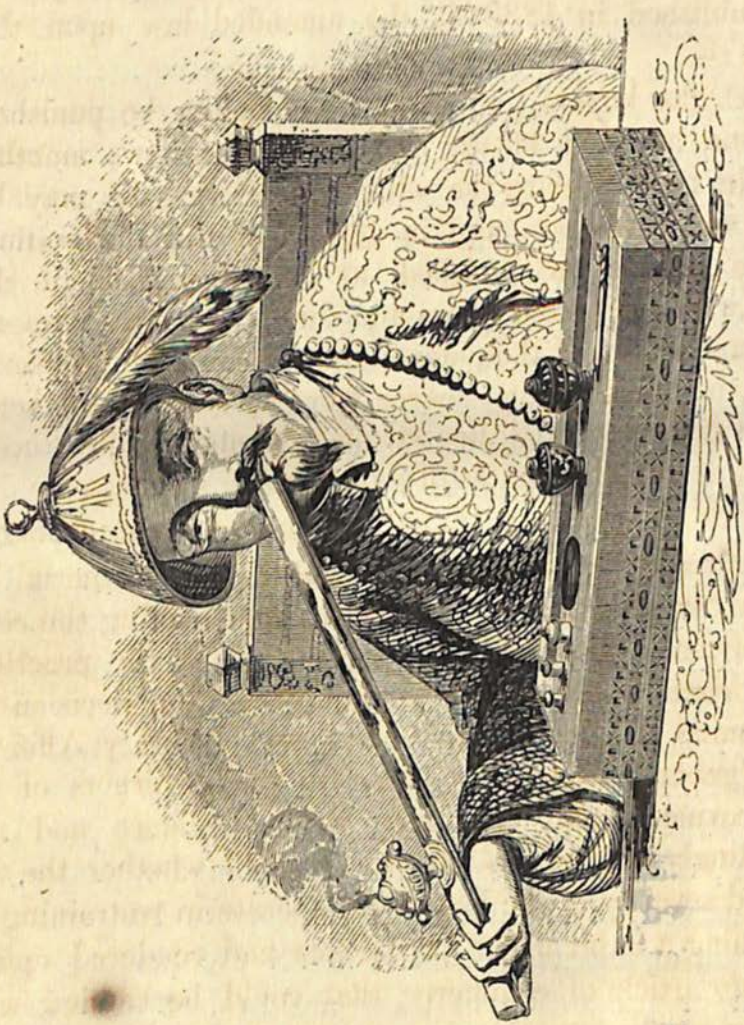
This had at length the effect of drawing the serious attention of the Peking government to the growing evil, and it seems certain that the aggregate value of the importation, which in 1832 exceeded the enormous amount of 15,000,000 dollars, or between three and four millions sterling, afterwards diminished for some time. From the original MS. translation of a Chinese state paper, the following abstract may be interesting. A late memorial to the emperor from one of the censors laid open the evil in all its deformity, and showed its prevalence among the officers of government:—"I have learned," says he, "that those who smoke opium, and eventually become its victims, have a periodical longing for it, which can only be assuaged by the application of the drug at the regular time. If they cannot obtain it when that daily period arrives, their limbs become debilitated, a discharge of rheum takes place from the eyes and nose, and they are altogether unequal to any exertion; but, with a few whiffs, their spirits and strength are immediately restored in a surprising manner. Thus opium becomes, to opium-smokers, their very life; and, when they are seized and brought before magistrates, they will sooner suffer a severe chastisement than inform against those who sell it.

"The local officers sometimes receive bribes to connive at the practice, or they are induced in the same way to desist from a commenced prosecution. The greater number of traders who carry about Canton goods for sale smuggle opium with them; and when the magistrates sieze opium-smokers, these declare they cannot identify the persons from whom they bought the drug. It is my

humble opinion that the injury done by opium is twice as great as that which results from gambling; therefore the offence of smoking it should not be more lightly punished than the other. Now the law provides that gamblers shall declare where they obtained their gaming utensils, and unless they inform against the sellers they shall be considered as accomplices, and punished with a hundred blows and three years' transportation. Every convicted gambler must be punished, under any circumstances, with eighty blows, and, if he be an official person, his punishment shall be increased one degree. But the opium-smoker, who will not inform against the seller, is simply pilloried and beaten for his own crime. I have therefore to propose the enactment, that all convicted opium-smokers who declare that they do not know the names of the sellers shall be considered as accomplices with them; and that, if the offenders be mandarins, or their dependents, they shall be punished one degree more severely. Thus may the severity of the law deter from the practice; the habitual smokers will not dare to persevere, and others will not venture to imitate their example.

"It seems that opium is almost entirely imported from abroad: worthless subordinates in offices, and nefarious traders, first introduced the abuse; young persons of family, wealthy citizens, and merchants adopted the custom; until at last it reached the common people. I have learned on inquiry, from scholars and official persons, that opium-smokers exist in all the provinces, but the larger proportion of these are to be found in the government offices; and that it would be a fallacy to suppose that there are not smokers among all ranks of civil and military officers below the station of provincial governors and their deputies. The magistrates of districts issue proclamations interdicting the clandestine

sale of opium, at the same time that their kindred, and clerks, and servants smoke it as before. Then the nefarious traders make a pretext of the interdict for raising the price. The police, influenced by the people in the



Mandarin with Opium-pipe.

public offices, become the secret purchasers of opium, instead of labouring for its suppression; and thus all interdicts and regulations become vain." And they became so utterly vain as to end in the uncontrolled freedom of

both trade and consumption that now has existed for some years since the war.

The censor then recommended the following regulation to be passed, which, having been considered and approved by the Criminal Board, was confirmed by the emperor, and published in 1833 as the amended law upon the subject:—

"Let the buyers and smokers of opium be punished with one hundred blows, and pilloried for two months. Then let them declare the seller's name, that he may be seized and punished; and in default of this declaration, let the smoker be punished, as an accomplice of the seller, with a hundred blows and three years' banishment. Let mandarins and their dependents, who buy and smoke opium, be punished one degree more severely than others; and let governors and lieutenant-governors of provinces, as well as the magistrates of subordinate districts, be required to give security that there are no opium-smokers in their respective departments. Let a joint memorial be sent in, at the close of every year, representing the conduct of those officers who have connived at the practice. The Criminal Board will communicate this decision to the Boards of Civil Appointments and Military Affairs; and a general order will be sent to the governors of all the provinces, that they may yield obedience and act accordingly." It was now to be seen whether the increased severity of the law would operate in restraining or abolishing a habit whose prevalence had rendered opium the *only* article of commerce that could be carried with success to the prohibited ports on the coast of China. The result was, that the law became a dead letter, and opium was at length conveyed openly about the streets.

The following statement shows that opium, about the end of the Company's charter, formed *one-half* of the total

value of British imports at Canton and Lintin, and that tea constituted something less than the same proportion of our exports:—

Imports in 1833.	Dollars.	*Exports in* 1833.	Dollars.
Opium	11,618,167	Tea	9,133,749
Other imports	11,858,077	Other exports	11,309,521
	23,476,244		20,443,270

The amount of the opium imported by us was thus greater than that of the tea exported. The narcotic drug sold to the Chinese exceeded in market-value the refreshing leaf purchased from them; and the balance of the trade was paid to us in silver. In the fourth chapter it has been already shown that the free trade which commenced in 1834 had the immediate effect of giving an impetus to all kinds of smuggling, at the expense of the fair trade. The Company had always effectually prevented the introduction of opium *within* the river; but notwithstanding the wish of the king's authority at Canton (grounded on his conviction of its danger) to stop this desperate traffic, his control over British subjects proved altogether inadequate to the purpose. Opium continued to be run up in British boats to Whampoa, and even to Canton. The government was at length roused,—a Chinese smuggler was executed before the factories, and Commissioner Lin immediately afterwards commenced that course of violence which has before been detailed,* and which ultimately led through the war to the abolition of the Hong monopoly, of the exactions at Canton, and all the other benefits secured by our treaty in 1842.

As tea has always held so principal a place in our intercourse with China, it requires some particular consideration as an article of commerce. We have seen

* See Chap. IV.

before that the fineness and dearness of tea* are determined by the tenderness and smallness of the leaf when picked. The various descriptions of the black diminish in quality and value as they are gathered later in the season, until they reach the lowest kind, called by us Bohea, and by the Chinese *Ta-cha*, "large tea," on account of the maturity and size of the leaves. The early leaf-buds in spring, being covered with a white silky down, are gathered to make Pekoe, which is a corruption of the Canton name, *Pak-ho*, "white down." A few days' longer growth produces what is here styled "black-leaved pekoe." The more fleshy and matured leaves constitute Souchong; as they grow larger and coarser they form Congou; and the last and latest picking is Bohea. The tea-farmers, who are small proprietors or cultivators, give the tea a rough preparation, and then take it to the contractors, whose business it is to adapt its farther preparation to the existing nature of the demand. The different kinds of tea may be considered in the ascending scale of their value.

1. Bohea, which in England is the name of a *quality*, has been already stated to be, in China, the name of a *district* where various kinds of black tea are produced. The coarse leaf brought under that name to this country is distinguished by containing a larger proportion of the woody fibre than other teas; its infusion is of a darker colour, and, as it has been more subjected to the action of fire, it keeps a longer time without becoming musty than the finer sorts. Two kinds of Bohea are brought from China: the lowest of these is manufactured on the spot, and therefore called "Canton Bohea," being a mixture of refuse Congou with a coarse tea called Woping, the growth of the province. The better kind of Bohea

* See Chap. XXI.

comes from the district of that name in Fokien, and, having been of late esteemed equally with the lower Congou teas, has been packed in the same square chests, while the old Bohea package is of an oblong shape.

2. Congou, the next higher kind, is named from a corruption of the Chinese *Koong-foo*, "labour or assiduity." It formed for many years the bulk of the East India Company's cargoes; but the quality gradually fell off, in consequence of the partial abandonment of the old system of annual contracts, by which the Chinese merchants were assured of a remunerating price for the better sorts. The consumption of Bohea in this country has of late years increased, to the diminution of Congou, and the standard of the latter has been considerably lowered. A particular variety call *Campoi* is so called from a corruption of the original name *Kien-poey*, "selection—choice;" but it has ceased to be prized in this country, from the absence of strength—a characteristic which is stated to be generally esteemed beyond delicacy of flavour.

3. Souchong (*Seaou-choong*, "small or scarce sort") is the finest of the stronger black teas, with a leaf that is generally entire and curly, but more young than in the coarser kinds. What is called "Padre Souchong" is packed in separate paper bundles of about half a pound each, and is so fine as to be used almost exclusively for presents. The probability is, that its use in that way by the Romish missionaries first gave rise to the name. The finest kinds of Souchong are sometimes scented with the flowers of the *Chloranthus inconspicuus* and *Gardenia florida*; and they cannot be obtained, even among the Chinese, except at dear prices. A highly crisped and curled leaf called *Sonchi* has lately grown into disrepute and been much disused, in consequence of being often found to contain a ferruginous dust, which was pro-

bably not intended as a fraud, but arose from the nature of the ground where the tea had been carelessly and dirtily packed.

4. Pekoe being composed mainly of the young spring-buds, the gathering of these must, of course, be injurious in some degree to the future produce of the shrub, and this description of tea is accordingly both dear and small in quantity. With a view to preserving the fineness of flavour, the application of heat is very limited in drying the leaves, and hence it is that Pekoe is more liable to injury from keeping than any other sort of tea. There is a species of Pekoe made in the green-tea country from the young buds, in like manner with the black kind; but it is so little fired that the least damp spoils it; and for this reason, as well as on account of its scarcity and high price, the hyson-pekoe, as some call it, has never been brought to England. The mandarins send it in very small canisters to each other, or to their friends, as presents, under the name of *Loong-tsing*, "Dragon's well," which is probably the name of the district where the tea is made.

Green teas may generally be divided into five denominations, which are—1. Twankay; 2. Hyson-skin; 3. Hyson; 4. Gunpowder; 5. Young Hyson. Twankay tea has always formed the bulk of the green teas imported into this country, being used by the retailers to mix with the finer kinds. The leaf is older, and not so much twisted or rolled as in the dearer descriptions: there is altogether less care and trouble bestowed on its preparation. It is, in fact, the *Bohea* of green teas; and the quantity of it brought to England fully equalled three-fourths of the whole importation of green. "Hyson-skin" is so named from the original Chinese term, in which connexion the *skin* means the *refuse* or inferior portion

of anything; in allusion, perhaps, to the hide of an animal, or the rind of fruit. In preparing the fine tea called Hyson, all those leaves that are of a coarser, yellower, and less twisted or rolled appearance, are set apart and sold as the refuse or "skin-tea," at a much inferior price. The whole quantity therefore depended on, and bore a proportion to, the whole quantity of Hyson manufactured, but seldom exceeded two or three thousand chests in all.

The word Hyson is corrupted from the Chinese name, which signifies "flourishing spring," this fine sort of tea being of course gathered in the early part of the season. Every separate leaf is twisted and rolled by hand, and it is on account of the extreme care and labour required in its preparation that the best Hyson tea is so difficult to procure, and so expensive. By way of keeping up its quality, the East India Company used to give a premium for the two best lots annually presented to them for selection; and the tea-merchants were stimulated to exertion as much by the credit of the thing as by the actual gain in price. Gunpowder, as it is called, is nothing but a more carefully-picked Hyson, consisting of the best rolled and roundest leaves, which give it that *granular* appearance whence it derives its name. For a similar reason the Chinese call it *Choo-cha*, "pearl-tea." Young Hyson, until it was spoiled by the large demand of the Americans, was a genuine delicate young leaf, called in the original language *Yu-tsien*, "before the rains," because gathered in the early spring. As it could not be fairly produced in any large quantities, the call for it on the part of the Americans was answered by cutting up and sifting *other* green tea through sieves of a certain size; and, as the Company's inspectors detected the imposture, it formed no portion of their London importations. But the abuse

became still worse of late (as we shall presently see), for the coarsest *black* tea-leaves were cut up, and then *coloured* with a preparation resembling the hue of green teas.

Nothing could be more ill-founded than the vulgar notion, once prevalent in this country, that the colour of green tea was derived from its being dried on plates of copper. Admitting that copper were the metal on which they were placed, it does not at all follow that they should assume such an appearance from the operation; but the pans really used on these occasions are of cast iron, of the same round or spherical shape as the tatch described under the head of Chemistry. Each of these pans is bricked in, over a small furnace. A quantity of fresh leaves are placed in the pan, after it has been sufficiently heated, and stirred rapidly round by the hand to expose them equally to the action of the heat, and at the same time prevent their burning. After being a little curled by this drying operation, they are taken out and twisted or rolled by hand to assist the natural tendency; and the process of curling is continued for a longer or shorter time according to the nature and quality of the tea. The hand seems to have most to do in the case of green teas, and the fire in that of the black. In the preparation of the finer teas, much care and attention is bestowed on the selection of the *best leaves* subsequent to drying; as in the separation of the Hyson from its *skin*, or refuse—a business which falls to the lot of women and children. The tea, when prepared, is first of all put up in baskets, and subsequently packed by the contractors in chests and canisters. The black teas are trodden down with the feet, to make them pack closer; but the green tea-leaves would be crushed and broken by so rude a process; they are accordingly only shaken into the chests.

It is a question of some importance how far a sudden increase in the demand for tea is calculated to injure its average quality. The essential services derived by the East India Company from their experienced inspectors, who from long practice acquired that readiness in discriminating the slightest shades of quality which nothing but practice could confer, demonstrated the expediency of such professional persons being still employed under the free-trade system; by all those, at least, who were not rash enough to trust to themselves, or to the Chinese. One of the inspectors, Mr. Reeves junior, stated from his own experience, at the close of 1833, that he had detected many attempts to pass off spurious or adulterated teas among the black kinds. The greater portion, indeed, of a particular description of tea, distinguished by the term *Ankoi*, was mixed with spurious leaves. These were of various kinds, but appeared generally to be largish leaves cut up, though it was found impossible to ascertain the trees or shrubs to which they belonged. The two most prevalent were a thick, soft, dark-green leaf, very smooth, and a palish hairy leaf, with the veins strongly marked. The former is not detected easily, and only by inspecting the leaves after infusion, as it imparts no bad smell to the tea, and is hardly perceptible even to the taste; the latter is readily discovered by its giving to the tea a "faint and odd" smell, as well as taste.

But this was nothing in comparison with the effrontery which the Chinese displayed in carrying on an extensive manufactory of *green* teas from *damaged black leaves*, at a village or suburb called Honân, exactly opposite to the European factories, but divided from them by the river. The remission of the tea duties in the United States occasioned, in the years 1832 and 1833, a demand for green teas at Canton which could not be supplied by the.

arrivals from the provinces. The Americans, however, were obliged to sail with cargoes of green teas within the favourable season; they were determined to have these teas; and the Chinese were determined they should be supplied. Certain rumours being afloat concerning the manufacture of green tea from old black leaves, the writer of this became curious to ascertain the truth, and with some difficulty persuaded a Hong merchant to conduct him, accompanied by one of the inspectors, to the place where the operation was carried on. Upon reaching the opposite side of the river, and entering one of these laboratories of factitious Hyson, the party were witnesses to a strange scene.

In the first place, large quantities of black tea, which had been damaged in consequence of the floods of the previous autumn, were drying in baskets with sieve bottoms, placed over pans of charcoal. The dried leaves were then transferred in portions of a few pounds each to a great number of cast-iron pans, imbedded in chunam or mortar, over furnaces. At each pan stood a workman stirring the tea rapidly round with his hand, having previously added a small quantity of *turmeric* in powder, which of course gave the leaves a yellowish or orange tinge; but they were still to be made green. For this purpose some lumps of a fine blue were produced, together with a white substance in powder, which from the names given to them by the workmen, as well as their appearance, were known at once to be *prussian blue* and *gypsum*.* These were triturated finely together with a small pestle, in such proportion as reduced the dark colour of the blue to a light shade; and a quantity equal to a small teaspoonful of the powder being added to the

* Prussiate of iron and sulphate of lime.

yellowish leaves, these were stirred as before over the fire, until the tea had taken the fine bloom colour of Hyson, with very much the *same scent*. To prevent all possibility of error regarding the substances employed, samples of them, together with specimens of the leaves in each stage of the process, were carried away from the place.

The tea was then handed in small quantities, on broad shallow baskets, to a number of women and children, who carefully picked out the stalks and coarse or uncurled leaves; and, when this had been done, it was passed in succession through sieves of different degrees of fineness. The first sifting produced what was sold as Hyson-skin, and the last bore the name of Young Hyson. As the party did not see the intermediate step between the picking and sifting, there is reason to believe that the size of the leaves was first reduced by chopping or cutting with shears. If the tea has not highly deleterious qualities, it can only be in consequence of the colouring matter existing in a small proportion to the leaf;* and the Chinese seemed quite conscious of the real character of the occupation in which they were engaged; for, on attempting to enter several other places where the same process was going on, the doors were speedily closed upon the party. Indeed, had it not been for the influence of the Hongist who conducted them, there would have been little chance of their seeing as much as they did.

It is an interesting and important point to determine whether the same system of artificial colouring enters at all into the manufacture of the more genuine green teas brought to this country. Mr. Brande, in his skilful and minute analysis of black and green teas, detected the presence of a colouring substance in the samples of green

* The turmeric and gypsum are perfectly innocuous; but the prussian blue, being a combination of prussic acid with iron, is a poison.

upon which he operated, which, as far as it goes, is proof positive; and some presumptive proof is afforded by the peculiar properties so universally attributed to green tea, in its exercising a powerful and hurtful influence on the nervous system. One fact is well ascertained and undeniable: the Chinese themselves do not consume those kinds of green tea which are prepared for exportation. The *Yu-tsien* mentioned before, and the Pekoe made from the green-tea plant already described, have a yellower, and as it were a more *natural*, hue, than the bluish-green that distinguishes the elaborated teas imported by us. If deleterious substances are really used, our best safeguard consists in the minute proportions in which they must be combined with the leaves.

Of the 31,500,000 lbs. of tea which, on an average of the four last years of the Company's charter, were imported into this country, the proportion of green to black had been about one to five. Various reasons conduced to make the black a preferable article of consumption to the majority. It is not only cheaper than the green, but it abounds much more in that quality termed "strength," and is besides, with the exception of the Pekoe kind, capable of being kept for a long time without any perceptible deterioration. It would be useless to pretend that the long sea-voyage, in which the equator is twice crossed, and the water in which the ship floats is often heated to between 80° and 90°, has no ill effect on tea cargoes. With an *absolute and complete* absence of all humidity, we know that heat has little or no decomposing effect; but such a state cannot be the ordinary characteristic of a ship's hold, as must be clear to all who have found the difficulty of preserving some articles from damage between this and India. Black tea is better able to contend with the chances of injury, to which a cargo may be exposed,

than green.* It has generally been subjected in a much greater degree to the action of fire in drying, and has, besides, less delicacy of flavour than the other. Instances have been known of black tea being kept in this country for ten years, or even longer, without suffering perceptibly; and the Chinese themselves generally lay it by for a year in preference to using it fresh. There seems upon the whole little difficulty in accounting for the superior condition in which green tea, especially, is said to be found in Russia. The same circumstance of a land-journey, which makes it come dearer to the consumer,† tends at the same time to preserve its quality, for the region which it traverses is generally dry as well as cold.

In no instance has a greater revolution taken place in the habits of a people than in that which tea has effected within the last hundred years among the English. It was known, about the middle of the seventeenth century, rather as a curiosity than an article of use, as appears from an entry in Pepys's gossiping Diary, dated 1661, in which the writer says that he "sent for a cup of tea, a Chinese drink, of which he had never drank before." About the beginning of the last century it came more into use; and the following statement exhibits the surprising strides which it made from time to time, in the space of just one hundred years, towards its universal consumption at the close of the Company's charter:—

	lbs.
1734	632,374
1746	2,358,589
1758	4,205,394

* Some of the Company's finest Hyson teas were packed in double cases of wood besides the canisters.

† The lowest retail price at St. Petersburg is between five and six shillings English, and the highest is said to be above thirty-eight shillings per pound.

	lbs.
1768	6,892,075
1785	10,856,578
1800	20,358,702
1833	31,829,619

In 1806 the excise duty was raised to ninety per cent., and in 1819 to nearly one hundred per cent., on the sale price of all teas—a tax which must have had a powerful effect in checking the growth of consumption. In spite, however, of this, it is well known that the importations into this country exceeded the aggregate consumption of the whole western world besides.* By a letter written from Siberia to Canton, in 1819, it appears that the quantity annually carried to Russia amounted to 66,000 chests, containing about 5,000,000 lbs., and no material increase has since taken place. The French trade with China seems lately to have shown a tendency to increase. A year or two since there were several French ships at Canton and other ports, where it was formerly unusual to see one; and French consuls have been appointed since the war. Up to 1832 the consumption of tea in France barely equalled 250,000 lbs.; but a notion that it was an antidote to cholera is said to have brought it more into use, while a large amount is annually required for the English residents alone.

In the year 1832 no less than seventeen Dutch vessels visited China from Holland or Batavia, though the importations of tea into Holland did not exceed 2,000,000 lbs. per annum. A Danish ship now and then arrives at the ports; but the consumption of Denmark has been no greater than that of France. In most other countries of Europe, tea, if sold at all, is generally met with as a drug,

* After the opening of the trade, the tea duty was reduced to 2*s.* a pound on all teas alike; and now, in 1857, the duty is 1*s.* 5*d.*, to be ultimately brought down to 1*s.*

and hardly looked upon by the merchants as an object of trade. Next to the British trade, the most considerable in tonnage and value has been that of the United States; subject, however, to fluctuations from which our own has been free. The remission of the tea duties, already alluded to, gave it, in 1833, a sudden stimulus, and the exports and imports at Canton, on the part of the Americans, each of them exceeded eight millions of dollars on board of nearly fifty small vessels. In consequence, however, of the losses sustained upon the teas, the American tonnage in the following year, 1834, was greatly reduced, nor was it expected very soon to reach its previous amount. The annual consumption of teas in the United States was then commonly estimated at about 8,000,000 lbs. Until the year 1824 our North American colonists, in Canada and Nova Scotia, were chiefly supplied with tea smuggled across the lakes from the northern states of the Union; but in that year the East India Company began to send an annual provision of about three ship-loads of cheap teas to Quebec and Halifax, which had the effect of altogether stopping the American supply.

The opening of the four new ports of trade, consequent on the Treaty of 1842, naturally produced a great revolution in most branches, both of our own and the American trade, and especially in the largest, that of tea. From something above thirty millions of pounds at the close of the Company's charter, the importation into Great Britain grew to forty-two millions in 1844, and in 1856 it was above eighty millions. As the shipments at Shanghae increased, those at Canton relatively diminished; though the positive aggregate quantity from both places was augmented. Even Foochow-foo, at first so unpromising, from the difficulties of the river and the discouragements

on the part of both government and people, of late years exported a considerable amount of black teas, the manufacture of the province.

But the largest increase of all was in the article of raw silk from Shanghae. This had been comparatively an inconsiderable branch of commerce at Canton, situated so far from the silk-producing districts; but the last year's importation from Shanghae, in 1856, was to the immense amount of 50,000 bales in this delicate and costly material. Meanwhile, the insuperable prejudices of the Chinese have operated, as before, against an extended consumption of our own manufactures, and the result has been that, in lieu of British goods, an enormous drain of silver to the Chinese ports has occasioned no small amount of public inconvenience.

CONCLUSION.—The comments of so high an authority as Lord Brougham,* after an examination of the foregoing work, upon the institutions of China, are of such value as to render some extracts from them the most fitting conclusion.—"The Chinese Empire certainly presents to the eye, both of the common observer and of the political reasoner, the most singular spectacle in the whole social history of our species. A territory of enormous extent, stretching fourteen hundred miles from east to west, and as many from north to south, peopled by above three hundred millions of persons, all living under one sovereign—preserving their customs for a period far beyond the beginning of authentic history elsewhere—civilized when Europe was sunk in barbarism—possessed, many centuries before ourselves, of the arts which we deem the principal triumphs of civilization, and even yet not

* Political Philosophy, vol. i. p. 160.

equalled by the industry and enterprise of the West in the prodigious extent of their public works,* with a huge wall of fifteen hundred miles in length, built two thousand years ago, and a canal of seven hundred, four centuries before any canal had ever been seen in Europe; the sight of such a country and such a nation is mightily calculated to fix the attention of the most careless observer, and to warm the fancy of the most indifferent. But there are yet more strange things unfolded in the same quarter, to the eye of the political philosopher. All this vast empire under a single head; its countless myriads of people yielding an obedience so regular and so mechanical, that the government is exercised as if the control were over animals or masses of inert matter; the people all this while not only not plunged in rude ignorance, but actually more generally possessed of knowledge, to a certain extent, and more highly prizing it, than any other nation in the world; the institutions of the country established for much above five-and-twenty centuries, and never changing or varying during that vast period of time; the inhabitants, with all their refinement, and their early progress in knowledge and the arts, never passing a certain low point, so that they exhibit the only instance in the history of our species of improvement being permanently arrested in its progress; the resources of this civilized state incalculable, yet not able to prevent two complete conquests by a horde of barbarians, or to chastise the piracies of a neighbouring island,† or to subdue a petty tribe‡ existing, troublesome and independent, in the centre of a monarchy which seems as if it could crush them by a single movement of its body; the police of the state all powerful in certain directions,

* This was written when our railroads were only just commenced.

† Japan. ‡ The Meaou-tse: see Chap. VI..

and in others so weak as habitually to give way for fear of being defeated; the policy of the state an unexampled mixture of wisdom and folly—profound views and superficial errors—patronage of art and of science, combined with prohibition of foreign improvements—encouragement of domestic industry, with exclusion of external commerce —promotion of inland manufactures and trade, without employing the precious metals as a medium of exchange —suffering perpetually from the population encroaching upon the means of subsistence, and yet systematically stimulating the increase of its numbers; removing every check which might mitigate the evil, and closing every outlet for the redundancy; finally, so unwieldy, anomalous, factitious a system of policy, enduring for so many ages, and for the last two centuries in a state of the most unbroken peace, without a foreign quarrel or a domestic convulsion, while all the rest of mankind have been laying waste the earth with their conflicts and changing the face of society by sudden revolutions—such are the marvels which the Chinese history presents to the contemplation of the inquiring mind."

It needs hardly to be observed that the above was written before our war, and the revolution occasioned by it.

APPENDIX.

I.—Free Importation and Consumption of Opium.

The following report from the consul at Amoy (some time since the war) will prove, among many others of the same description, that both the sale and the consumption of opium are now carried on without any attempt at either concealment or prevention. It would therefore be quite as impertinent for us to interfere, as for the Chinese to interfere with the enormous, and far more hurtful, consumption of spirits in England.

"The dépôt ships lie among the six islands which form the eastern limit of the port of Amoy. These vessels are supplied with opium by small clipper schooners coming up and down the coast.

"The native boats convey the opium from the dépôt ships to Amoy, and these boats (on account of the costly value of the goods, nearly 100*l.* each chest) are well manned and armed against the pirates. The opium is brought to the wharves at all hours of the day, and carried through the town without molestation from the authorities. The shops, of which there are many, pay for a licence to the Haefâng mandarins at the rate of ten dollars a month (or 25*l.* a-year).

"The demand has increased very much of late, to the extent of even forty per cent. in the course of six months. In some cases the opium is paid for at Amoy, and delivered to order—in others the money is sent, and

the opium received at the ship; and, as the boats ply in perfect security, it is probable that the demand will increase."

At the termination of the Company's charter in 1834 the importation of opium was 20,000 chests. It has since been as much as 70,000 per annum, in value nearly 5,000,000*l.* sterling. This is merely the result of perfect freedom, both of importation and consumption.

II.—The Tae-ping Rebellion.

There can be no doubt whatever of the existing insurrection in China having been the result of our own war. A Manchow general, in his report, distinctly stated that "the number of robbers and criminal associations is very great in the two Kwang provinces (*i. e.* Kwang-tung and Kwang-se), and they assemble without difficulty to create trouble; all which arises from that class having detected the inefficiency of the imperial troops during the war with the English barbarians. Formerly they feared the troops as tigers; of late they look on them as sheep. Of the multitudes of irregulars who were disbanded on the settlement of the barbarian difficulty, very few returned to their original occupations—most of them became robbers." —He observes that "the army has never recovered from the effects of the want of success in the *barbarian business* (as they call our war): the troops regard retreat on the eve of a battle as established custom, and the abandonment of their posts as an ordinary affair."

Mr. T. T. Meadows's curious work on the Chinese insurrection, with which he has a most intimate acquaintance (having been deputed by the British plenipotentiary on a mission to its chiefs), affords full and authentic ac-

counts of its rise and progress, all confirming the above fact of the rebellion having been the consequence of the disorganization produced by our war. I stated this distinctly five years ago in my two volumes, 'China during the War and since the Peace.'

A Chinese Christian, who had received his lessons in the rudiments of our religion from a missionary named Roberts at Canton, being a man of some education, and of a most daring, enterprising, and enthusiastic temperament, took advantage of this very evident state of things to put himself at the head of an insurrection, of which the avowed object was the destruction of idolatry, as well as the expulsion of the Tartars. But with that characteristic Chinese conceit and presumption which cannot adopt even a religion without modification and change, he called himself the brother of Jesus Christ, while a fellow chieftain subsequently assumed the title of the third person in the Trinity. In short, as I have observed in another place, they were no more like Christians than Mahomet was like a Jew; and the hopes, which were at first raised of their success as Christians, were very soon succeeded by dismay and disgust at their blasphemy as impostors.

It is possible, at the same time, that they have been impelled by fanaticism, and began by deceiving *themselves*. When informed by our plenipotentiary at Nanking that we must remain neutral, and could not assist them, they told Mr. Meadows that they were under the special protection of Heaven, and needed no assistance whatever.

> "'Tis true they build their faith upon
> The holy text of pike and gun;
> Decide all controversies by
> Infallible artillery;
> And prove their doctrine orthodox
> By apostolic blows and knocks."

At the commencement of the insurrection it was naturally supposed that the Triad Society, whose professed object is the expulsion of the Tartar dynasty, and the restoration of the *Ming* or native Chinese line, must be principally concerned in its origin. Communications of course took place as to a coalition, but the Tae-pings said, "Exterminate the Tartars by all means—that is our common object—but as to the restoration of the *Ming*, we have our own particular views on that point; we have a word to say on that subject ourselves." The Tae-pings received none of the Triads among their number, but such as were willing to abandon their peculiar practices and accept instruction in the new doctrine. They plainly declared that their "Heavenly Prince had received the divine commission to exterminate the Manchows, man, woman, and child, and to possess the empire as its true sovereign."

It is remarkable that the person first despatched by the emperor to subdue the rebellion in the south was Commissioner Lin, of opium celebrity. He quitted Foo-chow-foo, his native city, in 1850, on this unpromising errand, to himself doubly melancholy and unpropitious, as he must have keenly felt that his own rash and overbearing conduct at Canton, only a few years before, had been the cause of that fatal collision with the British in which all the embarrassments and miseries of his country had originated. He, in fact, died on his journey, worn out and probably brokenhearted.

The Tae-pings commenced their movements in the southern parts of the Canton and Kuâng-se provinces, being largely reinforced by the hardy seafaring and piratical population of the coast, whose occupations had been partly suspended or disturbed by our cruisers, and whose energies were thus turned inwards on the country.

During the course of two years they gradually, but steadily, worked their way by *Kwei-lin*, the capital of the western province, until they arrived, in June, 1852, at the ridge of mountains known as the abodes of the Meaou-tse, or independent hill-men, who have never been quite subdued by the Tartars. Here they seem to have obtained a reinforcement of some 3000 to their army. They proceeded still northward, but much more rapidly, by *Chang-sha*, the capital of Hoo-nan province (but without taking it), until they approached the eastern shore of the vast lake called Tung-ting Hoo, about December, 1852. They passed the lake and reached the great river Yang-tse-keang towards the end of that month. Like the fabled giant whose strength was renewed on contact with his mother earth, these seafaring people of the coast acquired fresh force when they found themselves embarked on their native element—the water. I remember often remarking, during our progress up the same mighty river with Lord Amherst's embassy in 1816, the great difference between the creeping, timid navigation of the inland sailors in that part of the centre of China and the bold and skilful seamanship of the Cantonese on the coast, who would, in the most boisterous weather and at the distance of leagues from shore, board another vessel either as pilots or pirates. They were so sensible of the advantages which accrued to them from their possession of the river, that they never again quitted its course. They proceeded down the stream until they vastly added to their resources by the capture of Han-kow, the greatest internal trading mart of the empire. Here it is probable they were encouraged to form the bold project of taking Nanking, the ancient capital of the Chinese dynasty, and they went on, unarrested and almost unopposed, along the Great River, passing the Poyang lake, and taking Ganking-foo, the capital of

the southern division of Keang-nân, in February, 1853. This city I visited with our embassy, and have given an account of it in the 'Sketches of China.' * From the country about this and other captured towns they collected large amounts of supplies and provisions; and with fresh accessions of strength, as they moved onward, they appeared before Nanking at the commencement of March, 1853, and took it with very slight resistance on the 19th of that month, putting all the Tartars to death. This, with the passage of the canal at Chin-keang-foo, has for four years been the term of their real progress; for though two successive armies have been despatched to the neighbourhood of Peking, they have both returned without success, but still unbroken and in good order. The Tae-pings, however, have commanded the valley of the Yang-tse-keang from Nanking as far as *Eechang* west of the Tungting lake, a distance of several hundred miles, and comprising some of the richest portion of China.

* Vol. ii. p. 40.

INDEX.

ABACUS.

ABACUS, or *suân-pân*, used in arithmetic, ii. 244
Actors, stage directions to, ii. 150
Affrays, law concerning, i. 290
Agriculture, discouragements to, ii. 324; objects of cultivation, 326; no artificial pastures, 329; allotment of wastes to the poor, 331; manures, 332; irrigation, 334; rice cultivation, 335.
Alceste, H. M. ship, silences Chinese forts, i. 87
Almanac, contents of, ii. 254
American flag hoisted at Canton, i. 65; sailor delivered up to Chinese, 90.
Amherst, Lord, embassy of, i. 80
Amherst vessel sent on trading experiment, i. 107; failure of the same, 108
Amoy captured, i. 152; a new consulate, 159
Amusements, i. 378
Anarchy, hateful to Chinese, i. 259
Anatomy, ignorance of, ii. 228
Annals, barren and uninteresting to Europe, ii. 128
Anson, Commodore, at Canton, i. 44
Apartments described, i. 403
Aphorisms, collection of, ii. 120
Arabians, early visits of, i. 4; superseded at Peking by Jesuits, ii. 247
Arch, ancient knowledge of the, ii. 267
Architecture, ii. 263
Argo, H. M. ship, measured by Chinese for port-charges, i. 51
Aristocracy of China, official, i. 202
Arithmetic, ii. 243

BELLS.

Arms of military, i. 275
Arrow lorcha, outrage on flag, i. 178
Art of printing, early in China, i. 229; ii. 174; process of, 176
Arts and inventions, ii. 173
Artemisia, species of, the moxa, ii. 227
Assumption, i. 354
Astrology combined with medicine, ii. 223; identical with its former state in Europe, *ibid.*
Astronomy, knowledge of, ii. 247; of Hindoos compared, 250
Astronomical instruments constructed by Arabians, ii. 251
Averages of the climate at Canton, ii. 321
Aviary at Macao, ii. 275
Ayew, a Chinese linguist, banished to Tartary, i. 77

B.

Ball on cap denoting rank, i. 270
Bamboo, numerous uses of the, ii. 299
Banks of rivers planted with fruit-trees, ii. 334
Barbers, numbers of, i. 395
Barometer, monthly averages, ii. 321; extreme depression during typhoons, 323
Basaltic rocks, ii. 315
Bats ominous of good, ii. 98
Batuta, Ibn, his account of China, i. 6
Belles-lettres, consisting of drama, poetry, and romance, ii. 138
Bells, ii. 196

BIOGRAPHICAL.

Biographical works, ii. 133
Birds, ii. 285
Boca Tigris, batteries forced, i. 118: captured, 149; convention signed, 166
Books, printed, ii. 177
Boots, complimentary ceremony of, i. 394
Botany, ii. 292
Bowring, Sir John, i. 177
Braves, a disorderly militia, i. 171
Bremer, Sir G., captures Bogue forts, i. 149
Brewster (Sir David) accounts for puzzling property of metallic mirrors, ii. 197
Bricks turn blue in baking, ii. 312
Bridges, ii. 266
Brougham, Lord, his comments on China and its institutions, ii. 407.
Budhism in China, ii. 37; Indian history of, 38; five interdicts, 40; priests, *ibid.*; resemblance to popery, 41, 53, 57; Chinese objections to, 47; account of, by Mr. Gutzlaff, 50; scriptures in a language unknown to the vulgar, 57; heaven and hell, 60; doctrines, 63; Chinese, 67
Buffalo, small species, ii. 283
Butcher, singular case of, i. 89

C.

Calculating dish, ii. 244
Camellia, is allied to tea-plant, ii. 294
Camphor, used in medicine, ii. 227; timber trees producing, 296
Canal, Imperial, described, i. 185
Candles, mode of making, ii. 193
Cangue, or moveable pillory, punishment of, i. 285
Canton, siege of, i. 150; riot, 159; another riot, 160; another, 167; trained volunteers, 168; expedition to, 170
Canton, streets of, i. 453; shops described, 454; trading associations, *ibid.*; frequent fires, 457; temples, 464; foreign factories, confined state

COAL.

of, 466; subject to floods, *ibid.*; condition of European traders, 468; China-street and Hog-lane, 469; population of town, 471
Cantonese, their superior seamanship, ii. 415.
Caps, i. 385
Carnivora, larger kinds scarce, ii. 279
Carving in wood and ivory, ii. 199
Cathcart, Colonel, sent to China, his death, i. 60
Catholic missions, i. 20; scandalous disputes of priests, 22; who are denounced and expelled, 25
Celibacy of Budhist priests, ii. 58
Censors, public, i. 268
Census of population, ii. 348
Cercle de Craie, French translation of a play, ii. 154
Ceremonial usages, i. 355
Chain-pump described, ii. 258
Chalky formation, north of Peking, ii. 308
Chapoo captured, i. 156
Character, good and bad traits of, i. 300
Charms, ii. 94
Checks to population, of the positive kind, ii. 352
Chemistry, practice of, ii. 235
Chĕ-keang, province of, i. 198
Children, i. 331
Chinese compared with other races of men, i. 307; squabbles with, near Lintin, 109
Chinhae captured, i. 154
Chinkeang-foo captured, i. 158
Chow, dynasty of, i. 221
Christ, Chinese account of, ii. 54
Chusan, first capture, i. 147; second, 153; restored, 166
Civil code of present dynasty, ii. 134
Clanship, prevalence of, in Canton and Fokien, i. 459
Classification of objects in nature, ii. 268
Climate and meteorology, ii. 319
Coal, near Peking, ii. 309; near Poyang Lake, 310; at Canton, 313; its use described by Marco Polo, 314

COASTING.

Coasting trade, restrictions on, ii. 353
Cochin-China, mission to, i. 66; tributary to the empire, 211
Coin of base metal, ii. 367; its inconveniences, 369; of silver not adopted, 370
Comets, ii. 249
Commerce, early, i. 12, 17; internal, ii. 378; foreign, at Canton, 380
Company's trade, termination of, i. 110
Compass, early knowledge of, ii. 184; said to point south, 186; variation of at Peking long known, *ibid.*
Concubinage, legalized, effects of, i. 323
Conduct is fate, tale in proof, ii. 91
Confucius, his era, i. 222; hereditary honours of his descendants, 320; birth of, ii. 1; character of his ethics, 3
Conjurors, i. 379
Consoo fund, its origin, ii. 382
Contrariety of usages to our own, i. 349
Conveyance of goods, i. 411
Cookery, Chinese, resembles French, i. 371; steam applied to, ii. 240
Corea, a tributary country, i. 211
Corporations at Canton, i. 455
Corundum, ii. 317
Costumes described, i. 383; theatrical, ii. 143
Cotton, mode of cleaning, ii. 193
Council of state, i. 267
Critique on penal code, from Edinburgh Review, i. 292
Croton Sebiferum, candles made from, ii. 193; tree described, 298
Crows sacred birds, ii. 98
Cultivation, principal objects of, ii. 326
Cycle of sixty years, ii. 250

D.

Davis, Mr., succeeds Lord Napier, i. 120

ECLIPSES.

Davis, Sir John, reaches Hongkong, i. 160; receives visit from Keying, 165; expedition to Canton, 170
Debtor and creditor, law of, i. 292
Diet of poor indiscriminate, i. 374
Diet and regimen, essay on, ii. 226
Difficulties of language overrated, ii. 103
Dinner, invitation to, i. 361; forms attending, *ibid.*; description of one, 363
Diplomatic forms, i. 356
Discussions in 1829, i. 98
Dispensary at Macao, ii. 241
Distillation, process of, ii. 240
Divination, mode of, ii. 100
Division of labour, its advantages explained by Mencius, ii. 17; an argument for different orders in society, 18
Divorce, grounds of, i. 326
Doctor at Canton, ii. 228
Dog, described by White of Selborne, ii. 280
Dogs used for food, i. 374
Doris, H. M. ship, in China, i. 78.
Drama described, *ii.* 139
Drawing and painting, *ii.* 213
Dress, summer and winter, i. 385
Drinking games, i. 378
Drug-shops, ii. 226
Drury, Admiral, at Canton, i. 74
Ducks reared in boats, i. 375
Dutch settle on Formosa, i. 26; their contests with the Chinese, 28; are expelled by force, 31; embassy suffered by performing the *ko-tow*, 81
Dwarf trees, ii. 303
Dwellings described, i. 397

E.

Earthquakes, ii. 316
Eating-houses, i. 376
Eclipses, ii. 249

EDUCATION.

Education, influence of, i. 257; very general, 332; process of, 333
Elliot, Captain, chief superintendent, i. 124; delivers opium to Lin, 135
Embassy from Marcus Antoninus, i. 3; of Earl Macartney, 60; of Lord Amherst, 80; from China to Khan of the Tourgouths, ii. 130
Emigration, obstacle to, ii. 345
Emperor is worshipped with divine honours, i. 263; has absolute disposal of succession, 265; is high priest of heaven, 266
Emperor, new, in 1850, i. 176
English, first visit of, i. 33; trade at Formosa, 37; confined by Tartar dynasty to Canton, 38
Entertainment, imperial, described, i. 359
Ethics of Chinese fairly considered, ii. 118
Eunuchs, former power of, i. 227
Examinations, public, i. 334
Expedition to Macao from Lord Wellesley in 1802, i. 65; from Lord Minto in 1808, 73

F.

Factory defended by guns, i. 101; invaded by Chinese, 103
Factories at Canton, i. 466; subject to floods, *ibid.*
Fashions not liable to sudden vicissitudes, i. 390
Fatalism of the Chinese, ii. 90; some superior to it, 91
Feast conferred by emperor, i. 359
Festivals, i. 345; meeting the spring, 351; imperial ploughing, 352; of silkworms and weaving, *ibid.*; of dragon-boats, 354; for the dead, *ibid.*
Fine arts, ii. 213
Fire of Canton in 1822, i. 94; great risk of, 457
Fire-arms forbidden, i. 383

GEOGRAPHY.

Fire-works, i. 349
Fish, predilection for, i. 375; of China, ii. 290; modes of taking, 342
Fishing-birds, ii. 288, 342
Five Canonical Works, ii. 18
Flint, seizure and imprisonment of Mr., i. 49
Flowers described, ii. 306
Fŏ, or Budha, temple of, near Canton, ii. 42; Chinese objections to his doctrines, 47; Paradise and Hell, 60
Fokien province, i. 199
Food and drink, i. 370
Foochowfoo, new consulate, i. 159
Foreign intercourse, Chinese maxim regarding, i. 54
Forensic medicine, practice of, ii. 229
Formosa, European settlements at, i. 26, 37; account of the island, 209
Forts near Canton, armament of, i. 479; forced by frigates, *ibid.*
Fortunate Union, a romance, outline of, ii. 163
Four Books, notices of, ii. 8
Fraternities, illegal, i. 459
Freemasonry, i. 462
French, contests with English at Canton, i. 47; consul delivers up a man, who is strangled, 53
Fruits described, ii. 302; trees planted on banks of rivers, 334
Funeral rites, i. 337
Furniture of apartments, i. 403.

G.

Gambling, i. 377
Games and amusements, i. 378
Gardening, ornamental, i. 403, ii. 214
Garments, for winter and summer, i. 385
Gas, use of, ii. 315
General, duties of a, i. 478
Geographical sketch of empire, i. 180
Geography, science of, ii. 246

GEOLOGICAL.

Geological notices, from Peking to Canton, ii. 307
Ghosts, belief in, ii. 95
Ginseng, an imperial monopoly, ii. 361
Glauber's salt, ancient knowledge of, ii. 243
Gongs, ii. 196
Government, character of, i. 249; expenses of, ii. 358
Governor-General's despatch to Canton, i. 105
Grain-junks on canal, vast number of, ii. 358
Grammar of language very limited, ii. 110
Granite islands about Canton, ii. 314
Grapes, mode of cultivating, ii. 305
Gratitude, instance of, i. 298
Great Wall described, i. 191
Gunner, unhappy case of, i. 57
Gunpowder, early knowledge of its composition, ii. 181; not at first applied to gunnery, *ibid.*
Gutzlaff, Mr., his account of Chinese Budhism, ii. 50; of a Budhist monastery, 66
Gypsum, or alabaster, abundance of, ii. 312; used in colouring spurious green teas, 401

H.

Haenan, island of, i. 210
Hân, dynasty of, i. 224
Handmaids are domestic slaves, i. 325
Heir in Old Age, a play, analysis of, ii. 147
Hell of Budhists, ii. 61
Herbert, Sir T., defeats Chinese force, i. 149
Hereditary rank of imperial kindred, i. 316; of the descendants of Confucius, 320
Hieroglyphics, Egyptian, unlike Chinese characters, i. 310, ii. 102
Histories, voluminous, ii. 127
Homicide, law of, i. 290

JADE-STONE.

Hong monopoly abolished, i. 158
Hong merchants, intrigues of, i. 46; debts to Europeans recovered, 56; failure of two, 96; their value to the government, ii. 381; answerable for foreigners, 384
Hongkong ceded by treaty, i. 158
Honours to just magistrates, i. 393
Hoo-kuang, province of, i. 200
Houses of rich described, i. 398
Humoral pathology in medicine, ii. 224
Hundred plays, collection of, ii. 146
Hunting expeditions of Tartar court, i. 380
Husbandry, great economy in, ii. 339

I.

Ice, use of, i. 371
Imogené and Andromache, H.M. ships, force the batteries, i. 479
Imperial despatch delivered to Lord Amherst and commissioners, i. 88
Indemnity for war, 21 millions of dollars, i. 158
Infanticide, i. 305; arguments against, 474
Ingenuity in arts, ii. 192; examples of, 212
Ink, called Indian, how made, ii. 180
Innate moral sense, creed of the Chinese, ii. 29
Insects, ii. 291; producing wax, 292
Instruments of music, ii. 217
Interest of money, high rate of, ii. 375; causes of this, 376
Internal trade, ii. 378
Inundation at Canton, i. 467; country subject to, ii. 309
Irrigation of lands, machines for, ii. 258; simple mode, 334
Itinerary, Chinese, i. 411

J.

Jade-stone, ii. 317

Japan, Chinese expedition against, i. 214
Jews, very early in the country, i. 7
Jones, Sir William, his paraphrase of *Chinese verses*, i. 328
Junks described, ii. 187; mode of navigating, 189; want of discipline, 190; trade in, 378

K.

Kang-hy, a great monarch, i. 22; reigned sixty years, 239
Kao-lin, what substance, ii. 205
Kea-king, reign of, i. 241; his will, 243
Keang-nan, province of, i. 195
Keang-sy, province of, i. 197
Keshen, imperial commissioner, i. 148; degraded, 149
Keying, commissioner, makes peace at Nanking, i. 158; appointed to Canton, 160; visits Hongkong, 165
Kidnapping children, i. 475
Kien-loong, grandson of Kang-hy, reigned sixty years, i. 240
Kindred, regard to, i. 304
King's evidence, species of, in penal jurisdiction, i. 287
Knowledge, threefold distribution of, ii. 220
Koblai Khan, i. 231
Koshinga, his expulsion of the Dutch from Formosa, i. 27-31
Ko-tow, or prostration, impolicy of performing, i. 81; consequences to the Dutch of performing it, *ibid.*; real import of, 86
Kuân-yin, idol of Chinese Budhists, ii. 64
Kuâng-sy, province of, i. 200
Kuâng-tung, or Canton province, i. 197
Kuei-chow, province of, i. 200
Kwan, Chinese admiral, defeat of, i. 143

L.

Lackered ware, whence obtained, ii. 212
Ladrones, Chinese pirates, account of, i. 68
Land-tax, ii. 354
Landscape-gardening, ii. 214
Language and literature, ii. 102
Lanterns, feast of, i. 347
Laou-keun, the Chinese Epicurus, ii. 70
Laplace, Captain, his description of a Chinese dinner, i. 363
Laurus camphora, a timber tree, ii 296
Law, Chinese, contrasted with Japanese, i. 294
Letters rank above arms, i. 271
Lin, commissioner, arrival and conduct at Canton, i. 133; demands surrender of opium, 135
Linguists, ii. 384
Linois, Admiral, repulsed by Company's fleet, i. 67
Lintin, smuggling traffic at, i. 105; ii. 385
Literary habits, ii. 115
Literature, classification of, ii. 117
Locusts, ravages of, ii. 325
Lolos, the, i. 208
London, Chinese poem on, ii. 160
Loo-choo tributary to China, i. 212
Luck, ii. 99
Lunar year, ii. 252
Lun-yu, conversations of Confucius, ii. 11

M.

Macao, condition of, i. 18; expeditions to, 65, 73
Macartney, Earl, mission of, i. 60
Machinery of government, i. 263
Magic, practice of, ii. 73

MAHOMEDAN.

Mahomedan creed tolerated, i. 7; its professors in Canton, 464
Maitland, Admiral, visits China, i. 128
Male offspring indispensable to Chinese felicity, i. 331
Mammalia, ii. 278
Mammoth, the Siberian, ii. 284
Man considered a microcosm, ii, 233
Manchow Tartars limit trade to Canton, i. 11; country of, 205; conquer China, 236
Manures, different kinds in husbandry, ii. 332
Manuscript account of present dynasty, ii. 129
Marco Polo, the Venetian, i. 10; his correct account of junks, ii. 188; of the use of coal, 314; of paper currency, 373
Marcus Antoninus, embassy from, i. 3
Marriage, i. 326; ceremonies of, 328
Masses for the dead in Budhism, ii. 51
M'Clary, a ship-master, daring act of, i. 54
Meaou-tse, independent mountaineers, i. 200; successful against emperor's troops, 203
Mechanics and machinery, ii. 255
Mencius, a sage next in rank to Confucius, ii. 14; his writings, 15
Mercurial preparations, ii. 235
Merits and demerits weighed together, ii. 49
Metals, ii. 318; manufactures of, 195; teapots of, covering earthenware, 196
Metallic gongs, bells, and mirrors, ii. 196
Military, amount of, i. 272; their inferiority, 273; character at Canton, 274; ranks, 278
Mill for domestic use, ii. 256
Milne, Dr., his translation of the Sacred Edict, ii. 118
Minerals, ii. 317
Ming dynasty expels the Mongols, i. 233

NUMBERS.

Ministers of state, i. 267
Mirrors of metal, puzzling property of, ii. 197
Missions, early Romish, i. 9; further account of, 20
Modelling, ii. 216
Monastery of Fo, near Canton, i. 42
Mongol Tartars, i. 206; first possession of China, 230; expelled by Chinese, 233
Monopolies, ii. 360
Morals, rules of, ii. 116
Morrison, Dr., his observations on the ceremony of the *ko-tow*, i. 84; his dispensary at Macao, ii. 241
Mountains of China, i. 182
Mourning, periods of, i. 342
Moxa, or cautery, extolled by Sir W. Temple, ii. 228
Mulberry, cultivation of, for silkworms, ii. 201; the tree, 299
Music, art of, ii. 217
Mythological ages, i. 217

N.

Nanking, treaty of, i. 158; occurrence at, in last embassy, 447; deserted state of, 450
Napier, Lord, i. 113; his death, 120
National pride and ignorance, i. 301
Natural history and productions, ii. 268; researches in, by Europeans, 273
Navigateur, French ship, remarkable history of, i. 442
Navigation, art of, ii. 187
Nelumbium, or sacred lotus, ii. 306
Nestorian Christians, i. 3
New year, i. 345
Ningpo captured, i. 154; repulse of enemy, 155; a new consulate, 159
Nobility, species of hereditary, i. 262
Numbers, science of, ii. 244

O.

Oaths, not admitted in judicial proceedings, i. 286
Old age, most honoured, next to learning, i. 303
Olea fragrans, ii. 306
Omens, lucky and unlucky, ii. 98
Opium, proposal to tax, i. 125; delivered to Commissioner Lin, 135; smuggling trade in, i. 105, ii. 389; rapid growth of, *ibid.*; new law against, 393; has exceeded value of tea-trade, *ibid.*; mode of smoking, 392; on its free importation and consumption, 411.
Optics, science of, ii. 222
Oral language, differences in, ii. 107
Oranges, three distinct kinds, ii. 302
Orders of Chinese community, four, i. 315
Ornithology, ii. 285
Ostentation, absence of, i. 321
Osteology, knowledge of, ii. 229

P.

Pagan and Romish ceremonies alike, ii. 41, 53
Pagodas, i. 450
Paper, invention of, ii. 178; manufacture described, *ibid.*
Paper-currency of Mongols, described by Ibn Batuta, i. 6; by Marco Polo, ii. 373
Paradise of Budhists, ii. 60
Parallelism, a constant property of Chinese poetry, ii. 157
Parental authority, model of Chinese rule, i. 249; very consistently maintained, 250; effect of, on stability of government, 253; inculcated by Confucius, *ibid.*
Parker, Sir W., conducts squadron to Nanking, i. 157
Parsees, riot of, at Canton, i. 101
Pastures, no lands cultivated as, ii. 329

Pawnbroking, ii. 372; under strict regulations, 375
Peach, the flat, ii. 303
Pearson, introduction of vaccination by Mr., ii. 233; his account of mercurial preparations, 235
Peking, extent of walls, i. 420; interior aspect, 422; Tartarian city, 427; population, 428; Chinese city, 429; dangers of emperor, 431
Peking Gazette, nature of, i. 266
Penal Code, character of, i. 279; its defects, 280; arrangement lucid, 282; practical effects, 294
Peopling of China, conjectures on, i. 309
Persecution of Roman Catholics, i. 247
Personal appearance, i. 310
Pe-tsae, a favourite vegetable, i. 372
Pe-tun-tse, what substance, ii. 206
Philosopher and his Wife, a tale, ii. 74
Physical characteristics, i. 307
Physics, Chinese scheme of, ii. 225
Pig, universally kept by the poor, i. 374
Pinto, adventures of, i. 14
Pirates condemned, i. 445
Plants, small proportion arrived in England, ii. 278
Plays, character of, ii. 144; compared with Greek drama, 145
Ploughing, modes of, ii. 336
Poem on London, ii. 160
Poetry, account of its progress, ii. 155; its structure, *ibid.*; specimens of, 158
Police of Peking, i. 439; efficiency of, in China, *ibid.*
Politeness, odd specimen of, i. 369
Pootala, monastery of Budhists, described, ii. 65
Pope, first mission from, i. 9
Popery, resemblance to Chinese Budhism, ii. 41
Population, ii. 340; causes of excessive amount, 341; statements concerning examined, 346

PORCELAIN.

Porcelain, domestic ornaments of, i. 405; manufacture, ii. 204; ingredients of, 205; origin of name, *ibid.*; bottles found in Egyptian tombs, 209

Porters, public, i. 411

Portuguese first appear at Canton, i. 12; established at Macao as tenants-at-will, 18; intrigue against English, 34, 38, 74; deliver an Englishman to be strangled, 52

Posts for government expresses, i. 410

Potato, little cultivated, ii. 331

Pottinger, Sir H., arrival of, i. 152; signs treaty of Nanking, 158

Prayer of the emperor, ii. 34

Presents at new year, i. 347

Primitive features, i. 314

Primogeniture, i. 334

Principals and accessaries, law of, i. 287

Printing, early knowledge of, i. 229, ii. 174; process in, 176

Prisons, severe, i. 286

Privileged classes, i. 287

Provinces of China, eighteen, i. 180; described, 194

Provincial governments, i. 268

Prussian blue, used in colouring spurious green teas, ii. 401

Public expenditure, ii. 363

Public-houses, i. 376

Public opinion exercises some influence, i. 257

Pulse, doctrine of the, ii. 232

Punishments, mistake regarding, i. 283; bamboo, or bastinade, allotted as measure of crimes, 285; capital, 286

Q.

Quarrels punishable, i. 292

Queen of Heaven, ii. 31; supposed to be adopted from Romish idols of the Virgin, 53, 56

ROOKS.

R.

Rafts, i. 472

Raw produce more in demand than foreign manufactures, i. 379

Rebellion commenced in Canton and Kuâng-se, i. 175; stationary at Nanking, 176; character of, 177

Red Book, or Court Kalendar, printed quarterly, i. 269

Relatives of emperor, condition of, i. 437

Relics worshipped by Budhists, ii. 41

Religion—Confucians, ii. 1; Budhists, 37; Taou sect, 70

Reptiles, few venomous, ii. 290

Restrictions on coasting-trade, ii. 353

Revenues—land-tax, ii. 354; partly in kind, 357; salt-tax, 360; duties on tea and alum, 361; ginseng, *ibid.*; on transit and on imports and exports, 362; inadequate to expenditure, 364; amount of, 358

Ricci, Matthew, founder of the Romish mission, i. 20

Rice, predilection for, i. 373; cultivation of, ii. 335

Rice-paper, vulgar name for a species of pith, ii. 300

Right-angled triangle, properties of its sides represented, ii. 245

Rites, ancient book of, ii. 22

River-craft, i. 411

Rivers of China, i. 184

Robbery, punishment of, i. 289

Roberts, Mr., his mission to Cochin-China, i. 66; interdict against him, 76

Robinson, Sir George, succeeds Mr. Davis, i. 123

Rodent animals, ii. 284

Romances and novels, ii. 162; best pictures of society, *ibid.*; outline of one, 163

Romish and Pagan observances, resemblance between, ii. 41, 53

Rooks unlucky birds, ii. 98

ROOTS.

Roots, or radical characters, elements of a philosophic system, ii. 103
Rosaries of Budhist devotees, ii. 41
Ruminant animals, ii. 282
Russian intercourse with China, i. 31

S.

Sacred Instructions, book of, i. 250
Sacred language of Budhists, ii. 59
Sailors at Canton, i. 470
Salt-tax, ii. 360
Scene in the last embassy, i. 436
Sciences, ii. 220; despised where not practical, 221
Scottish bagpipe, music resembling, ii. 218
Sculpture and modelling, ii. 216
Sedans, convenient, i. 407
Seditious paper found at Macao, i. 460
Seres of ancient writers, not Chinese, i. 2
Shanghae, captured, i. 157; new consulate, 159; best port of trade, 163; insurgents at, 176
Shân-sy, province of, i. 204
Shantung province, i. 195
Shaving and shampooing, i. 395
Sheen, Edw., a sailor, case of, i. 71
Shen-sy, province of, i. 204
Shipping at Wampoa, expenses enormous, ii. 383
Shoo-king, an ancient history, ii. 20
Siberian mammoth, notice of, ii. 284
Silk manufacture, ii. 200; trade at Shanghae, 407
Silkworms, management of, ii. 203
Silver passed by weight, ii. 370
Six Boards, or tribunals, i. 267
Skating at Peking, i. 381
Skins universally worn, i. 390
Slavery, condition of, i. 288
Sluice on the canal, passing one, i. 417
Small feet of women, i. 312; not adopted by Tartars, *ibid.*

TCHEN.

Small-pox and inoculation, ii. 233
Smith, Capt., defeats Chinese junks, i. 143
Smuggling, system of, ii. 385
Soldier, duties of a Chinese, i. 478
Sons highly prized, i. 332
Songs, ancient book of, ii. 18
Spaniards, their advantages neglected, i. 26
Spectacles, enormous, ii. 222
Spells, ii. 97
Stage costumes, splendid, ii. 143
State worship described, ii. 30
Statistical works of empire and provinces, ii. 133
Staunton, Sir G. T., negotiation by, i. 79; commissioner of embassy, 81; his description of Peking, 423; of Nanking, 449; on the literary habits and moral system of the Chinese, ii. 115; on the tenure of land, 355
Steam, cooking by, ii. 240
Stewart (Dugald) on invention of printing, ii. 174
Study, rules for, ii. 112
Sugar-mill, ii. 257
Sulphate of iron, how procured, ii. 241
Superstitious practices, ii. 90
Sy-fân, the, i. 208
Sysee, ii. 371
Szechuen, province of, i. 204

T.

Tae-ping rebellion, remarks on, ii. 412.
Talent, road open to, i. 318
Talismans and spells, ii. 97
Tang, dynasty of, i. 226
Tuou sect described, ii. 70
Tartar and Chinese troops unequally paid, i. 274
Tartars, progress of, i. 230
Taverns and eating-houses, i. 376
Taxes partly levied in kind, ii. 357
Tchen, the only coin, ii. 367

TEA.

Tea, its varieties: black teas, ii. 395; green, 397; mode of preparation, 398; spurious black teas, 400; damaged black coloured green, *ibid.*

Tea-plant, ii. 292; favourite soil of, 294; allied to camellia, *ibid.*; indigenous to Company's new territories, *ibid.*

Tea-trade of England, ii. 403; rapid growth of, 404, 406; trade of Europe, 405; of America, 406

Tea-stone, used for shading eyes, ii. 222

Temples at Canton, i. 464

Terranova, Francis, case of, i. 90

Theory of creation, ii. 24; compared to Egyptian, Hindoo, and Greek cosmogony, *ibid.*

Thermometer, averages of, ii. 321

Three States (*Sân-kuo*), period of, i. 225

Timber trees, ii. 296

Tobacco-plant, ii. 302

Tombs, i. 340

Tools, originality of, ii. 199

Topaze, H. M. ship, affair of, i. 91

Torture, mode of, i. 286

Trade at Canton, heavy burthens on, i. 43; unsuccessful at Amoy, 45; forbidden at Ningpo, 49

Traders at Canton, miserable condition of, i. 468

Tragedy, analysis of one, ii. 151

Transit duties, ii. 362, 379

Translations, European, ii. 136

Trap rocks, ii. 314

Travelling by land, i. 407; by water, 411

Treason, law of, difference between, in despotic and free states, i. 281

Triad Society, i. 460

Tributary countries, i. 211

Trimurti, or triad of Budhists, ii. 63

Turmeric, used in colouring spurious green teas, ii. 401

Typhoons described, ii. 323

YANG-TSE-KEANG.

U.

Union of astrology with medicine, ii. 223

Unities of the drama neglected, ii. 142

V.

Vaccination introduced by Mr. Pearson, ii. 233

Variation of compass, early known, ii. 186

Varnish-tree, ii. 298

Vegetables in common use, i. 372

Victims, sacrifice of, ii. 33

Virgin, Romish idol, probably adopted by Chinese in their *Queen of Heaven*, ii. 53

Visiting, ceremonies attending, i. 357

Volcanic symptoms, i. 204, ii. 315

W.

War, art of, i. 272

War with China, i. 146

Wastes allotted to the poor, ii. 331

Water-wheel of bamboo, ij. 260

Wealth comparatively little respected, i. 261

Whisky, species of, i. 370

Widows, their privileges, i. 322

Wife, but one legal, i. 323

Wild cats a delicacy, i. 374, ii. 279

Women, condition of, i. 322; costume of, 395

Woosung captured, i. 156

Works on China, i. *Introduction*

Written and spoken languages, ii. 107

Y.

Yâng-tse-keang, the Great River, i. 183

YAOU.

Yaou and *Shun*, ancient emperors, i. 220
Yeh, Commissioner, his character, i. 178
Yellow River, i. 183; crossing it, 188
Yin and Yang, a sexual system of nature, ii. 24

YUN-NAN.

Yuen-ming-yuen, imperial gardens and palace, i. 435
Yukien, his cruelty, i. 153; his fate, 154
Yun-nân, province bordering on Ava, i. 204

THE END.

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